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H. A. COTTELL, M. D., AND M. F. COOMES, A. M., M. D., EDITORS.

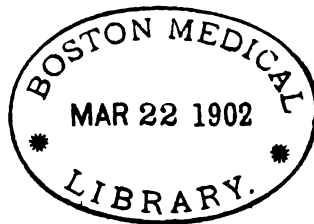
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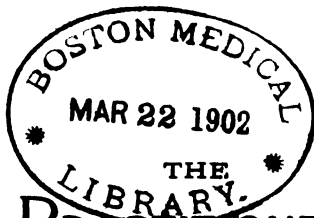
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NO. I.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

EPILEPSY.*

BY THOMAS H. BAKER, M. D.

A disease of which both etiology and pathology are practically unknown, and which lies closely to the borderlands of both medicine and surgery, can not but be of interest to surgeon and practitioner alike.

Such is epilepsy; and it is largely because so little positive is known relative to its cause and changes that I venture to introduce the subject to-night, hoping that through the discussion provoked something tangible and original may be produced.

Strictly speaking, epilepsy is not in itself a disease, but only a symptom of a morbid condition—a nervous affection resulting from a discharge of energy from the cortical cerebral cells, and having for its essential element a loss of consciousness.

Hammond classifies all the known varieties of this affection as follows:

- "1. Momentary unconsciousness without marked spasm.
- "2. Unconsciousness with evident though local spasms.
- "3. Unconsciousness with general tonic and clonic convulsions.
- "4. Irregular or aborted paroxysms.
- "5. Epilepsy characterized by hallucinations (thalamic epilepsy)."

I believe, however, that a division of the affection into grand mal,

* Read before the Louisville Medico-Chirurgical Society, November 23, 1900. For discussion see p. 22.

petit mal, and Jacksonian epilepsy can be made to embrace all the phenomena of the disease.

In the form known as "grand mal" there is entire loss of consciousness and power of muscular co-ordination with tonic and clonic convulsions. The attack is often preceded by a distinct aura, and such notice is not only a premonition but a part of the attack. This aura may be of different kinds, but is most commonly a sense of fulness or oppression in the epigastrium. It may be an odor, a sound, flashes of light, numbness or tingling. Whatever it may be, its significance is understood by the patient. Frequently, however, there is no warning, and the patient falls unconscious with or without a cry. The major attack may be divided into three stages:

1. Tetanic convulsions or tonic stage.
2. Irregular convulsions or clonic stage.
3. Stage of stertor.

The onset of an attack is usually very sudden. With or without a cry the patient falls, and is at once thrown into a state of tetanic rigidity. The face becomes highly congested, eyes turn upward, and respirations seem almost suspended. Then comes the clonic convulsions, characterized by severe and irregular muscular contractions. The head is thrown back; the hands are clenched; the thumbs flexed on the palms, and the fingers closed over them. In many cases patients froth at the mouth and may bite the tongue severely. The muscles of the face produce horrible grimaces, and the sphincters may be relaxed. After from five to fifteen minutes this condition ceases, the patient relaxes and merges into a state of stupor. Respiration is now deep and regular, muscles limp, and insensibility to all irritation is absolute. Upon awakening the patient has no recollection of what has occurred, but is drowsy and complains of muscular soreness.

The number and severity of the attacks differ widely. Some never have more than one; but in some most deplorable cases the attacks occur with such frequency, following so rapidly that the unfortunate patient barely recovers from one before another seizes him. This produces a condition which we term "status epilepticus." This state is always most dangerous, and death may occur at any time, though cases have been reported where "status epilepticus" existed for several days before death. I myself remember a case at the Lakeland Asylum where the patient was in a state of status epilepticus five days before death relieved him.

In "petit mal" the attacks may be very slight—in fact, so much so that they are many times unnoticed, and it is only because of their frequency and gradually increasing severity that the attention of the parents and the medical adviser is arrested. The patient may be engaged in the ordinary vocations when a momentary blank in his mental processes occurs. It is almost instantaneous, disappears at once, and leaves no feeling of discomfort, and there is immediate continuance of speech and thought. These "spells," "faints," or whatever they may be called, vary in frequency and intensity. Sometimes the patient, if conversing, stops suddenly, stares vacantly but fixedly for a moment, then almost as quickly recovers. It is most unfortunate that these attacks frequently exist for a long time without the friends devoting the attention to them which their importance demands.

If permitted to continue, these attacks are soon followed by pain in the head, vertigo, confusion of ideas, numbness and other evidences of mental derangement; and these symptoms become more pronounced as the epileptic condition becomes more confirmed. Both grand and petit mal frequently coexist in the same patient.

The third type of this affection is known as "Jacksonian epilepsy," in which there is no loss of consciousness, but irregular muscular disturbances confined to one side. This form of the disease is the one which offers most hope and encouragement for surgical interference.

No age is entirely exempt, but one half the cases begin at the period of life between ten and twenty years.

Etiology. Hereditary tendency stands first. In perhaps 10 per cent of the cases hereditary taint exists. It is not meant that epilepsy existed in the ancestors of 10 per cent of the patients, but some disease of the nervous system more or less closely allied to epilepsy was present. Blows on the head, falls, and sunstrokes will possibly account for 20 per cent of the cases. Fright, grief, mental overwork, and indigestion will be found in many instances to be the exciting cause, but in perhaps one half the cases no known cause can be found. Sex exercises no appreciable influence as a predisposing factor.

Pathology. The pathology is purely theoretical. We state that epilepsy is an explosion of nerve energy, though why this explosion should produce the symptoms we are unable to decide. Authorities are a unit in declaring that epilepsy has its seat, at least primarily, in the medulla oblongata and upper portion of the spinal cord, but even here pathological changes can rarely be demonstrated.

Prognosis. The prognosis is generally unfavorable, many able men going so far as to say that no cases of true epilepsy ever entirely recover. Confirmed epilepsy usually terminates in dementia. Some patients may enjoy life for years without an attack, though no cure can be considered final until a period of at least five years has elapsed between attacks.

Treatment. The treatment is largely empirical. The bromides stand pre-eminent, and should be thoroughly tried first in every case. The bromide of potassium, sodium, calcium, strontium, or a mixture of any or all, may be used in gradually increasing doses. If they arrest the attacks, they must be continued for a long time. Nitrite of amyl is beneficial in arresting the attacks when the period between the aura and the convulsion is sufficiently prolonged to permit of its administration. Nitro-glycerine, antifebrin, sulphonal, and several other drugs will sometimes produce temporary improvement. Personally, I entertain a high opinion of opium in the form of a gummy extract, in doses ranging from one-tenth to one-half grain three times a day for several weeks. At the end of this time stop it abruptly and prescribe the bromides in large doses.

In at least three cases in my practice under this treatment the convulsive attacks ceased—one for five years, one for more than one year, and in the other for six months.

The hygienic management of the patient is important. Exercise in the open air, nutritious food, with little or no meats, and the avoidance of all substances calculated to cause gastric or alimentary irritation. All toxic agents under suspension, such as alcohol, should be interdicted. Bowels should be kept regular and baths taken daily. Of course, it goes without saying that diligent search should be made for the cause, and this removed if possible.

LOUISVILLE.

OSTEOMYELITIS.*

BY IRVIN ABELL, M. D.

Assistant to the Chairs of Anatomy and Clinical Surgery, Louisville Medical College; Visiting Surgeon to Louisville City Hospital.

By acute osteomyelitis we understand an infection of bone. When we consider the function of the osseous framework of the body, and that the latter, even the densest of it, is a tissue, and as such is liable to infection, with resultant suppuration and necrosis, which not

* Read before the Louisville Society of Physicians and Surgeons.

only seriously interfere with its function, but with that of the entire system, at times to such an extent as to completely annihilate the vital processes, we appreciate the gravity of this lesion and the urgency of an early and thorough treatment. The rapidity of onset and the profound systemic depression sometimes seen give to the case a typhoid aspect, which is so striking that we find Chassaignac, who, in 1853, first described the condition, giving it the name of "typhus of the limbs."

The disease is distinctly an infectious one, being due, in the majority of cases, to the staphylococci; in others to the streptococci, pneumococci, typhoid bacilli, colon bacilli, and tubercle bacilli. The field of tuberculous osteomyelitis will not be entered in this paper, as the pathological and clinical course of the latter present pictures differing materially from the other varieties. The resistance against germ life afforded by the healthy organism having been lowered by constitutional or local causes, the germs gaining an entrance are enabled to live and multiply at the expense of the organism, which suffers not only locally from the direct action of the germs, but generally from the absorption of their toxic products. The bacteria gain entrance through the upper part of the respiratory tract, occasionally through skin lesions, their point of attack being often determined by some form of injury sufficient to produce a thrombus of one of the bone-vessels. The course of the infection is then a rapid one, thrombosis, coagulation, necrosis, and suppuration following each other in close succession and spreading quickly, resulting in more or less widespread local destruction, with constitutional toxemic symptoms often of alarming severity.

Death has been known to follow within thirty-six hours after the first symptom of an acute osteomyelitis. Fortunately, such extreme cases are rare. Ordinarily we first see evidences of a violent inflammatory infiltration, nature surrounding the localized point or points of infection with her phagocytic army in her endeavor to drive out the invaders. Here the miniature battle is fiercely waged, both sides receiving reinforcements to replace lost members; the bone marrow, representing the field of active operations, soon breaks down, and, with the fallen members of both sides, forms depots of pus, which spread toward the periosteum or toward the epiphyseal line. When it reaches the periosteum this membrane is thickened and loosened, corresponding to the amount of bone involved, and gives away in one or more places, so that the pus eventually comes to the surface. If it spreads

toward the epiphyseal line, the entire shaft of the bone becomes involved, and the infection may extend to the neighboring joints, leading quickly to pyarthrosis and destruction of joint structures.

In children the joint involvement seems to be guarded against by the epiphyseal cartilage, so that we see acute necrosis of the shaft of a long bone, with one or more perforations through its periosteum at various points between the epiphyseal extremities. The epiphysis, if involved at all in children, is usually secondarily so; occasionally the portion of bone between epiphysis and joint is primarily involved, in either case resulting in epiphyseal separation, with or without extrusion of the separated portion. With the occurrence of this process in the bone will appear various symptoms which are very significant: pain usually vague at first, but speedily becoming localized and very severe. There may or may not be a chill, but always fever, usually with morning remissions; the spleen is enlarged, and diarrhea is often seen as a result of the septic intoxication. The severer cases now assume the typhoid aspect, with or without delirium; the bone or bones to which the pain is referred become tender, often exquisitely so, prohibiting motion; the parts become reddened and swollen, and later on edematous, which is regarded as pathognomonic; various postures are produced by the muscle spasm which usually accompanies this condition; later on, the pus, having perforated the periosteum, may be felt in the tissues, or a loosened epiphysis can be detected by palpation. The thrombotic and metastatic accidents may be easily known by their disastrous consequences. The pus escapes as soon as the symptoms, local and general, ameliorate. Nature then throws out granulation tissue around the infected area, by which considerable protection is afforded, and the prognosis, as far as life is concerned, is improved; the dead and dying parts are walled off from the living tissue, at times completely separating it, forming a sequestrum; if the periosteum has been completely detached, it takes part in the granulation process, with the result that new bone is formed, the involucrum ensheathing the dead portion, strengthening and enforcing the weakened bone, enabling it to functionate without sustaining a fracture.

Following this wise provision of nature come efforts on her part at spontaneous repair, such as extrusion or elimination of the sequestrum by a process of softening in the line of least resistance. This process may extend over an indefinite length of time, and may completely ruin the bone or limb for further use. In these neglected cases one or more

sinuses are always found leading down to the central sequestrum. If the bone involved be one of the lower extremity, the patient walks upon it as soon as absence of pain permits him, when, on account of the callus not having been completely ossified and the osteoporotic condition of the diseased bone, curvature with deformity results; in children, if the bone be one of the forearm or leg, and particularly if the disease involve the epiphysis, the growth of the affected bone is sometimes checked or retarded, while that of its neighbor continues, resulting in inequality in length, deformity, and serious interference with function. Atrophy of affected bone with hypertrophy of healthy one is occasionally seen in bones of the forearm and leg. Curvature, as torsion or flexion in bones the subject of osteomyelitis, is sometimes seen as a result of muscle pull. If there be associated joint lesions, more or less complete ankylosis may follow. In children, epiphyseal separation is equivalent to compound fracture, resulting in union more or less complete, with or without ossification of the conjugal cartilage, and with or without deformity, and in some cases the extrusion of the entire epiphyseal fragment. The diagnosis is, as a rule, easy, particularly if the disease has existed for any length of time. In its early stages, and especially those of the fulminant type, it can be made only by a careful study of the local signs, in conjunction with the evidences of systemic intoxication due to absorption of poisonous material from the infected area; in adults, in whom the disease shows a predilection for the articular extremities, the only disease with which we are likely to confound it is articular rheumatism. When we remember that the latter is never followed by suppuration; that the lesions are usually multiple, while those of osteomyelitis are usually single; that the systemic symptoms of the latter are of a distinctly septic character, and, as a rule, are more serious and grave from the outset than those of the former, the distinction is easily made.

As soon as the diagnosis is made, we should at once institute treatment, and this treatment is essentially surgical. Anodynes are useful in relieving pain, but no time should be lost in freely exposing the infected area and thoroughly cleaning it out. If the case is seen early, when the local symptoms may be more or less obscure, with evidences of profound systemic depression, we should operate at once if we expect to save life, as our only hope lies in the free opening, cleansing, and draining of the infected areas; thorough exposure may require the opening of the entire shaft of the bone, but this should always be done.

Carrying our incision through the soft parts, the periosteum should be opened and separated from the bone; the compact structure may now be perforated with a bone-drill, and if purulent material exudes, the marrow cavity should be opened freely with the chisel, and the opening extended in either direction until all infected spots are exposed, when they should be thoroughly removed with the curette. If there be epiphyseal separation, or, more unfortunate yet, if there be joint involvement, they must be freely opened, washed out, and thoroughly drained; the wound should be packed and left open. When cases are seen later, after the pus has been evacuated, the indications for treatment are the same—exposure of the diseased area, removal of all dead and dying tissue, thorough curettement, and liberal drainage. After complete or partial removal of the shaft of a long bone, more or less complete bony regeneration is possible, particularly in the young; in the forearm and leg this regeneration, together with the compensatory hypertrophy of the parallel bone, permits of a restoration to usefulness. In the less fortunate cases amputation, with the substitution of an artificial limb, may be required. If the bone end be involved on the articular side of the epiphyseal line, with consequent epiphyseal separation and pyarthrosis, complete or partial resection may be indicated.

These operations are often prolonged and severe, but in no instance are they as severe as the ravages of the disease would be if left unoperated. In the fulminant type, where metastasis has not yet occurred, we note almost immediate amelioration of symptoms, and in thirty-six hours the patient, who has seemed on the brink of death, is happily on the road to recovery. The wound left after such operations is one that discharges freely as long as septic material is present, following the elimination of which granulations rapidly form, which are subsequently ossified. Our work should be thorough, since small particles of bone left behind are invariably thrown off later, thus prolonging convalescence and proving a source of trouble and worry to both ourselves and patient.

LOUISVILLE.

**GASTRO-ENTEROSTOMY WITH THE MURPHY BUTTON IN
MALIGNANT STRICTURES OF THE PYLORUS.***

BY F. T. MERIWETHER, M. D.

In this paper discussion is limited to the use of the button in malignant diseases of the pylorus, for in benign strictures it is possibly, in many cases, best to use the suture. The thickness of the wall of the stomach in benign cases, at times as much as one-half an inch, precludes the successful use of the button. And then the saving of time is not so important.

The mortality of the suture and the button operations is about the same, approximately 35 per cent, but the fact that a great many of the button operations are done on advanced cases, and the suture operation on the selected cases, the advantage is rather with the button cases. It should be impressed upon the profession that malignant growths of the stomach are surgical diseases, and as such should be treated. Few of these cases reach the surgeon until hopes of a cure are past, and then only palliation can be hoped for. Gastro-enterostomy is only palliative, but it prolongs life in many cases from two to three years, gives relief from a great deal of pain and suffering, and, if the other organs are not involved, it often restores the patient to a state of comparative good health temporarily.

A very important part of the technique is in properly preparing the patient. For at least three or four days preceding the operation, longer, if possible, nothing but sterilized food should be given by the mouth, and that only in small quantities. Experiments have shown the large number of bacteria in the stomach after taking food as ordinarily given. If necessary, the rectum may be resorted to, care being taken not to irritate it, for it will have to be utilized after the operation. For twenty-four hours before the operation nothing should be given by the mouth. In the preparation, the stomach should be washed at least three times a day, and immediately before the operation. Even with these precautions, when the stomach is opened it is found that in many cases there are remnants of food taken days before. The mouth, teeth, and gums should be thoroughly cleansed frequently.

Von Hacher's posterior operation should be preferred, though it is a little more difficult than the Nolfer, or anterior operation. With it there seems to be less regurgitations of bile, and the discharge of the button is favored more. Care should be taken to suture the edges of

*Abstract of a paper read by title before the Southern Surgical and Gynecological Association, Atlanta, Ga., November 15, 1900.

the meso-colon, through which the anastomosis is made to the stomach, for otherwise this opening will probably contract. The button opening does not contract. The incision for the insertion of the button is usually made too large, and then when the button is closed there is so much puckering of the walls of the stomach and intestine as to interfere materially. The incision should not be more than about two thirds of the diameter of the flange of the button, which should be gently worked in sideways. Re-enforcing sutures are not necessary, for if the button is closed properly leakage can not take place. A few sutures should be taken in the proximal loop of the intestine, supporting it against the stomach. This is more necessary in the anterior operation, for in it there is more tension upon the union. These sutures aid in preventing the bile entering the stomach and encourage the food passing into the distal intestine. It is best to have the direction of the intestine such that the waves of peristalsis of the stomach and intestine are in the same direction.

The button is usually passed in from one to three weeks, though it may be retained as long as three months. At times it will lodge in the rectum, and for that reason if the button is not passed in three weeks it is well to explore the rectum every few days. Even if the button is retained in the stomach, it will do no harm. Feeding should be commenced as soon as the patient is off the table, small quantities being given at first.

The author advises a gastrostomy in all cases, either by a Kader or Witzel operation, or, what is better, a combination of both of them, as modified by him. In it an oblique funnel-shaped canal is formed, the tube issuing through the left rectus muscle. This canal will accommodate a large tube, which can be easily removed and replaced.

The great advantage of being able to feed the patient at once after the operation with predigested food, first washing out the stomach, is almost invaluable. The causes of death in a large percentage of the cases are from asthenia, continued vomiting, inanition, and obstruction of the button. By being enabled to wash the stomach before every feeding, and to continue feeding irrespective of the patient's feeling, would save a great many of these cases.

In very weakened patients the operation might be done under local anesthesia, and no matter what the condition is, the operation should be offered to the patient as affording the only method of relief in this most fatal disease.

SHREVILLE, N. C.

THE TWO SIDES.*

BY J. J. WAKEFIELD, M. D.

It was long after I had made up my mind what thoughts would be presented in this essay before I could decide on a title, there were so many points touched upon, but as they related to either the professional or the business sides of the doctor, the caption seemed to me an appropriate one. From the time the student enters into the study of medicine until he is turned out a full-fledged doctor, one idea is kept perpetually before him, and that is his duty to the public. The motto of the doctor, then, is embraced in one word—duty. If he be asked to define that word, he would say that it means to heal the sick and care for the well. A simple definition this, to be sure, but how much it implies! To those only who have practiced medicine long is its full meaning understood or appreciated. It means hard work both of body and mind, cares, responsibilities, often disappointments, and often merciless criticism. If all the possibilities dreamed of in the heyday of young professional life should be realized, it would make a bright chapter indeed; but how few are there who fill up the measure of those expectations! The doctor has been so thoroughly engrossed in the duties that he owes to the public, that he has given little heed to self. Now comes up another side to this question. The public must learn that they owe a duty to the doctor. The business tact of the doctor will determine the success along this line. The public must learn that he is not a nickel-in-the-slot machine, but that he is human, and that he has wants just like other people's; that his is a profession, and that for the services rendered them just compensation must be made.

In this rôle the doctor will find the study of human nature very interesting, for the variety seems infinite; he will see it in all its phases. The types range all the way from the gentleman who knows what his duty is to you, who appreciates your work and pays you liberally for it, to that meanest fellow of all, the ingrate, who will pay you nothing, if he can avoid it, except abuse. I never hear one of this kind abusing a doctor but that I think his case is easy to diagnose; he has not paid the doctor his bill, or if he has, it was because the doctor made him do it, or else the doctor has done him some favor that was ill deserved. The most exacting people, generally, are those who want work done

* Read before the Brashear Medical Society at Bloomfield, Ky., October 16, 1900.

well, promptly, and cheaply. I can recall a fellow, in my earlier years as physician, who was never known to pay a doctor's bill; who from some fancied dereliction of duty on my part, gave me a curtain lecture, saying that if I were not more attentive to his family he would have to dismiss me and get him another doctor. That is what I call gall for you. Another fellow (this one was in good circumstances, too), I saw him pay cheerfully fifty cents for cosmetic for a daughter, and at the same time kicked like a steer because the doctor charged the same price for a prescription for his sick wife. But I thank the Lord that all the people are not like these. No, there are some that are the salt of the earth. I once presented a bill for seventy-five dollars to a man, and after he gave a check for it he said, "Doctor, I thank you very much for the good services you rendered my family, and also for the reasonable amount you have charged me for them. I had expected to pay you not less than one hundred and twenty-five, and thought perhaps your bill might be one hundred and fifty dollars." Though it has been twenty years ago, my constitution has never fully recovered from the shock. I always liked that man; he remained a true friend, and has paid me many nice fees, too.

I have found the most appreciative people to be those who pay best and most promptly. The best fees a doctor gets, generally, are those that are paid at the time services are rendered, or very shortly afterward; time seems to dim the work of the doctor in the minds of the people. When a fellow is on a sick-bed he thinks a great deal of the attention the doctor gives him, and feels that he can never repay him for the great services rendered; but often after he gets up and is well, the matter looks a little different.

"When the devil was sick,
The devil a monk would be;
But when the devil was well,
Devil a monk was he."

All will a man give for his life. King Richard, in peril on Bosworth field, would give his kingdom for a horse. I have often wondered if he meant what he said. I feel that he would have wanted some "knocked off." I have often wondered how the custom of making the doctor's bill the last to be paid originated; it seems to be a pretty well-established fact. We all hear people who owe us say, "Doctor, I had fully intended to pay you, but by the time I got through with all the others I didn't have any money left for you, but you will be the first

next time; or how much are you going to knock off? make it as light as you can, and I will pay you as soon as I get the money." I have thought that I would some time try a fellow by knocking off half, just to see if he wouldn't be as clever as Artemus Ward's friend, and knock off the other half himself.

The question of fees, or how much shall be charged for work, is one that seems ever to puzzle the doctor. This will always remain so; there are certain conditions that must, to a great extent, determine this for us—locality, ability of people to pay, etc. Each locality should have a scale of prices, though, for routine work, and should be adhered to by all physicians in that particular locality unless there is some very valid reason for deviating therefrom. Never allow anybody to "Jew" you out of a reasonable fee, and never undercharge another doctor. The fees for special work will depend upon the kind of work and the skill required in its performance. When the letter is silent the spirit should guide, and that is never to cheapen the profession under any circumstances.

What should be attitude of the physician to the public? It should always be a dignified one. If the public desire your services, let them command you. Never should a physician, with a true conception of the dignity of his profession, ask people to employ him or make voluntary proposals to do work, or offer medicines to people unbidden. No, leave such methods to the quack and the fakir. A doctor should place a higher estimate upon his profession, if not upon himself, than this. Ours is not a trade, it is a profession; maintain its dignity always and under all circumstances. If a doctor possess merit, the public will find it out and save him from the humiliating spectacle of sending word to sick people or their family that he has been very successful in treating or managing such cases; or, in other words, that he is "h—l on fits." We all have heard of the doctor that never lost a case of some special kind of disease, such as pneumonia, typhoid fever, or cholera infantum. Let other doctors' patients alone. If your services are required, you can be called in. Do not waste all that good information you possess by comments on the outside; it is not in good taste anyway, and besides may cause confidence to be shaken in the attending physician.

There is another matter that is worthy of comment—the services that a physician is sometimes called upon to render a county—usually in smallpox epidemics or holding a post-mortem examination. These services should be paid for just as other work, and are generally allowed,

but often reduced to a ridiculously low amount by the fiscal courts. With what fidelity do these courts guard the finances of the counties when a doctor's bill is presented! I am no "kicker," but just want fair play, that is all. The doctor is a true philanthopist. To the poor, who are always with us, he gives his services freely and gratuitously. If the health of the people or country be menaced, he is ever ready to render all necessary aid; he goes where he will not allow others to go; into the plague-stricken districts he hurries and fights back the pestilence; aye, even lays down his life for the cause of the people and for the cause of this greatest of all sciences. The country is ever ready to pay tribute to the heroes who have fallen in her defense in war, to rear the shaft in commemoration of their deeds of valor and perpetuate their memories. This is right, too, but the doctor who falls in defense of people and country fighting disease is no less a hero. All praise to him, say I. Let him be honored as all others who have laid down life for the cause of the people! I love to think of the great men who have given their heart, their all, to the cause of our profession. I feel honored in being one of its members.

I think of Jenner, the immortal Jenner, who did more for mankind than any other one man; and of Simpson, who gave to surgery her greatest boon; and many others in that bright galaxy of medical scientists. All honor, all praise to them! I am no cynic; while I believe there are many who will never appreciate the work of the doctor, yet I also believe that the vast majority will accord that meed of praise which he so richly deserves.

I love to read in the "Beside the Bonnie Brier Bush" the story of that good old hero of Drumtochty, Doctor Weelum MacLure; of how for "forty year" he had been good to the people of Drumtochty; of his faithfulness; of how, when he had laid down his life's work, in the delirium of death he yet thinks of duty, and thinks he goes on an errand of mercy to one who is sick. I hope and believe, too, when we have laid down life's work, that like him we will have by us in that last hour a Patrick Drumsheugh to offer up a "bit o' prayer" for the old, worn-out doctor.

BLOOMFIELD, KY.

IS VIVISECTION USEFUL?*

BY W. SYMINGTON BROWN, M. D.

I answer, yes. There may be some diversity of opinion among physiologists and surgeons how far it is useful. I do not rank its merits as highly as some do, but I have no doubt that vivisection helps to shed light on many of the most important questions relating to health and disease.

Within a few years persistent attempts have been made in America and England to pass laws against the practice of vivisection, on the ground of cruelty to the animals experimented upon. The number of persons engaged in the crusade is not large, but out of this small coterie very few are vegetarians. The majority eat animal food, and none of these can consistently object to vivisection on the ground of cruelty. The ox which furnishes beef has been felled, the sheep and pigs have been stabbed, the fowls have been strangled, and the fishes have suffered a lingering death after capture; in fact, all animals killed for food must endure more pain than the infinitesimal few operated on by pathologists to solve medical problems. If it is cruel to open a live rabbit for the sake of knowledge, how much more cruel must it be to kill thousands of them to appease our hunger. We could live on grain, vegetables, and fruit; that is, most of us could; but what would become of the Esquimaux or of visitors to the Arctic regions?

Nearly all our opponents profess to be Christians, Buddhists, or Mohammedans; that is, they believe in God as the creator of this world. Now, can they deny that many of the lower animals live upon each other? The lion, tiger, butcher-bird, hawk, and shark kill their prey—probably attended by suffering—and these carnivorous animals would starve if they did not kill them. This seems to be a part of the plan of creation; at all events, it is the result of a natural law. Surely our sympathetic friends will not accuse the Creator of cruelty.

We may go a step farther. The animal world embraces a vast variety of what we call vermin, such as lice, mosquitoes, mice, rats, and skunks. None of these are commonly used for food, but most people kill them unscrupulously. Why? Because they hurt us. Common sense answers some questions better and quicker than sickly sentiment. We eat certain animals because we thrive on that kind of food in cool

* Read before the Gynecological Society of Boston, September 13, 1900.

climates; we exterminate vermin because they are a nuisance; and we occasionally open a living rat in search of useful knowledge.

It is true that the late Sir Charles Bell, in his great work on the nervous system, says: "Experiments have never been the means of discovery, and a survey of what has been attempted of late years in physiology will prove that the opening of living animals has done more to perpetuate error than to confirm the just views taken from the study of anatomy and natural motions. . . . I have had recourse to experiments, not to form my own opinions, but to impress them upon others."

The above quotation in part has been cited by the opponents of vivisection in numerous pamphlets, but the authors omit the many passages in which Sir Charles details his experiments on living animals to prove the correctness of his conclusions. The truth is that he and his son-in-law, Mr. John Shaw, employed experiments more frequently than their confreres, and also with more success. The real functions of the trigeminus and the portio dura were unknown before Bell's discovery, and thousands of patients since then have been saved from facial paralysis as a result of these experiments.

I admit that vivisection does not occupy the first place in the study of functions or disease. A thorough knowledge of anatomy, human and comparative, is an essential preliminary. After that comes examination of disease, clinically during life and pathologically after death. Anatomical facts and post-mortem inspections are too often neglected by the overworked family doctor, who might sometimes find a clue to the treatment of obscure diseases and be better able to prognosticate their termination if he kept his early studies freer from mouldiness. The principal usefulness of vivisection is as a test for theories and as a means of surgical education. As a general rule it can only be employed by those who devote their whole lives to these abstruse studies. Very few physicians have either time or talent to devote to them.

In the great majority of cases animals are anesthetized before being operated upon, and die soon after. There is no evidence that cruelty is attempted or allowed in any of the English or American laboratories. Those who accuse us of cruelty are simply ignorant. They do not understand the necessities of the business, and, with good intentions, are blinded by a morbid sympathy. Even if they succeeded in getting a law enacted against vivisection, it could no more be enforced than the Maine prohibition law against alcoholic liquors. Laws passed by Con-

gress or by State legislatures not supported by public opinion, or contrary to natural laws, are dead letters. And it is one of nature's truths that men love knowledge, seek it eagerly, and can not be prevented from the pursuit by any bigoted or fanatical force whatever.

STONHAM, MASS.

**A CASE OF APPENDICITIS IN WHICH A LUMBRICOID WORM
PASSED THROUGH THE RUPTURED APPENDIX
INTO THE PERITONEAL CAVITY.**

BY PAUL H. SCHWANKHAUS, M. D.

On Friday night at 11 o'clock, November 24th, I was called to see Edward W., age thirteen years, who had been ill only a few hours, and found that he had appendicitis, a general peritonitis, and obstruction of bowels. There was no elevation of temperature; pulse 68 and very feeble. Vomiting and nausea were present to a distressing extent; any food, water, and medicine were immediately rejected, and vomit matter contained large quantities of bile. Pain was absent except on pressure, and abdominal wall was enormously distended. I saw him again on Saturday morning, November 25th, at 9 o'clock, and there was no change in his condition, and at 11 o'clock he died.

At the autopsy I found the abdominal cavity full of pus, and the free end of the appendix ruptured. Lying directly over the appendix (between the intestines and peritoneum) I found a large female lumbricoid. A careful examination of the intestines revealed the fact that there was no other opening through which the worm could escape into the abdominal cavity. In the appendix I found an enterolith, which was soft and about the size of an ordinary bean, and easily squeezed out.

LOUISVILLE.

A NEW OBSTETRICAL FORCEPS.

REPORTED BY DR. ERNEST G. MARK, KANSAS CITY, MO.

The disciples of the old McClean solid blade obstetrical forceps and the followers of the fenestrated blade forceps have now a common ground on which they may meet. A new obstetrical forceps, presenting the good features of both of its predecessors, without having inherited any of their objectionable characters, has been placed on the market. It is, in fact, a combination of both forceps, the cephalic surface pre-

senting a depression corresponding in depth and shape to the fenestra of the fenestrated blade forceps, while the uterine surface presents the same appearance as that of the solid blade. It is the idea of Dr. Hetherington, Professor of Obstetrics in the College of Physicians and Surgeons, Kansas City, who, it seems to me, very justly claims for this new instrument all that can be demanded by the most ardent supporters of either of the forceps now in common use. The depression corresponding to the fenestra obviates the objectionable feature of the solid blade—the tendency to slip—while the solid uterine surface answers equally as well the objections put forth by the enemies of the fenestrated blade, *i. e.*, the danger of disfigurement of the child by catching some projecting feature in the open fenestra, the solid back preventing any contact of the head with the placenta through the blade.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, November 23, 1900, William Bailey, M. D., President pro tem.,
in the Chair.

Three Cases of Enucleation. Dr. William Cheatham: I have here three eyes of rather recent enucleation. The first specimen is an eye removed from a man in Indiana. The bird law in that State was out on November 10th; he went out early in the morning, and was shot in the eye before 8 o'clock. The shot passed entirely through the globe. The question is whether or not an effort should have been made to save the eye. The man being in rather poor circumstances, unable to make a fight to save the eye, the eye blind, I suggested that it be removed. The wound being directly through the ciliary region, making it of some danger to the other eye, is another reason I advised removal. He submitted to the operation, and was able to go to work a week afterward. The other eye had a vision of $\frac{3}{8}$.

The second specimen was removed from a young lady living in Mississippi, who came to me first in 1898, complaining of gradual loss of vision in one eye. I examined her and found she had mydriasis, although the tension was —; she had detached retina. In my case-book at the time I made a record that it looked like there might be a

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

growth in the eye. She came back to me in August of last year with the eye very painful, hard, with secondary glaucoma, hemorrhage into the anterior chamber, and I removed the eye, finding it to contain a choroidal growth, probably a sarcoma.

The third specimen was removed from a child from Illinois, who gave a history of ophthalmia neonatorum. I could see the site of an old perforating ulcer of the cornea; there was present so-called buphthalmus. It is really a glaucoma involving the whole anterior part of the eye; an infantile glaucoma secondary to the condition of the cornea following ophthalmia neonatorum, in which the distension is in the anterior part of the sclera and cornea, the ciliary body becoming atrophied.

Discussion. Dr. J. M. Ray: This growth is interesting; we do not often find them so early in life, in my experience. The location and character of the growth indicate its nature. I do not see what else it can be except a sarcoma; no other growth is apt to occur in this region.

Dr. S. G. Dabney: These cases are all interesting. It seems to me there was no question about the propriety of removing the eye through which a shot had passed, in view of the fact that it did not have light perception. The eye would have been a menace to the patient had it been left, and no treatment, however skillful or prolonged, could have restored sight.

The subject of sarcoma of the eye is of considerable interest. I remember reading a short paper on the subject before this Society some years ago, giving the continued history of a case of sarcoma of the choroid I had removed three years previously, and showing the specimen. The patient was a lady, aged about fifty-five years. At that time one of my colleagues suggested that the propriety of letting the patient wear a glass eye was questionable, and some of the general surgeons stated that instead of removing the globe we ought to eviscerate all the contents of the orbit. The patient has done perfectly well; there has been no evidence of the reappearance of the growth in five or six years. She has worn a glass eye ever since.

I believe that sarcoma within the interior of the eye is less apt to return, and operation gives a better prognosis than sarcomata generally do. If operation is performed before the disease has extended beyond the limits of the sclerotic, the prognosis is good. In this connection I would like to say that I fitted a glass eye ten days ago in a young man

seventeen years of age, using the new thick glass eye which has been recently introduced, and am very much pleased with the result. The effect was decidedly better than the old-fashioned shell. There has been a great advance in the matter of glass eyes within the last year or two.

The third case does not appear to be a typical buphthalmus; it is secondary to the lesion of the cornea.

Dr. William Cheatham: Some time ago I reported a case of sarcoma of the eye, which I removed. There was a return of the growth in the orbit, and a secondary operation was performed. Sarcoma of the liver developed later, and the patient died at the end of six months.

Dermoid Cysts. Dr. L. S. McMurtry: There is no class of tumors in the abdomen that present such variety as ovarian cystomata. I have here two specimens that occurred to me might be of more than ordinary interest, both on account of the histological and clinical character of the cases.

The first specimen is from a woman, sixty years of age, who noticed an abdominal enlargement about three years ago which had all the characteristics of an ovarian cystoma, although it was then apparent that there was but one tumor. This tumor, which has been evacuated, was very large, the cyst wall was distended to the thinness of letter paper, and, in tapping, it was found filled with medullary matter which had the appearance of suppuration, and, on examination, it was discovered to contain a quantity of hair, teeth, bone, etc. You will observe here a quantity of hair and other characteristics of a suppurative dermoid cyst of the ovary. The hair was matted in medullary substance, and the cyst was filled with this material. The opposite ovary you will see lying beneath this one, which had numerous omental adhesions. I have made an opening into the second tumor, and you will see the characteristic medullary substance exuding therefrom. The second tumor seems to be simply an ordinary proliferating ovarian cyst, without any dermoid elements in it. As you are aware, the cause of these growths and their origin are unknown. These tumors have been carefully studied, and many theories have been advanced as to their origin, but none of them are thoroughly satisfactory.

Case 2. Here is another dermoid cyst which is of more recent removal. The difference in color is due to the fact that this cyst was gangrenous. You will observe an area which is broken down, and the

twisted pedicle can also be seen. The pedicle was carefully cut away so as to leave the twist in it, and if you will examine the specimen you will observe the twist, which shut off the circulation, and the patient had a sharp attack of peritonitis. This tumor was removed from a girl eight years of age, the youngest subject I have ever seen with an ovarian cyst, although there are cases on record very much younger; indeed, occurring in infancy and pre-natal life. The diagnosis in this case was made before the operation; it was very easy to differentiate this tumor from the kidney; the tumor could be traced; she had fever and active peritonitis.

Both patients are doing nicely, and I will say in regard to the little girl, that I have never seen a case after abdominal section as little trouble. She has never cried since the operation.

Discussion. Dr. B. C. Frazier: I am glad to hear Dr. McMurtry speak about the child behaving so well after abdominal section. It has been an observation of mine that children are very much better subjects for surgery than adults; they behave much better after operative intervention of any kind. I do not know whether it is that the child thinks it has to behave or whether it naturally submits, not having learned to resist.

Dr. T. H. Baker: I would like for the surgeons to discuss some of the theories of dermoid cysts; to me they are most interesting and most mysterious tumors.

Dr. Louis Frank: The only plausible theory is the enclosure of fetal epithelial structures in the ovary. I have seen the view expressed in regard to the probability of pregnancy or impregnation, but of course that does not hold good. In early fetal life we find these tumors about the head, eyes, neck, etc. Wherever there are epithelial structures we are apt to find these tumors. We never find in them any thing of epithelial structure. I think they are all probably due to the enclosure of epiblastic structures in early fetal life.

Dr. L. S. McMurtry: In an operation like this upon a child there is great danger of including in the pedicle, in placing the ligature, the uterus. I never realized this danger so much before operating upon this case. It is spoken of by numerous operators that the anatomy here is perverted by the position of the growth, especially in active peritonitis, which attaches all contiguous structures in an inflammatory exudate. The uterus of a child eight years old is more infantile than

the ordinary infantile uterus, so-called, of adult life; the uterus of a child this age is a little flat body, which is very difficult to find. It was only by getting it beneath my fingers and examining it closely to see the muscular structure, that it could be differentiated from the broad ligament. I never before realized how easy it would be in making a pedicle to include the uterus in the ligature. The uterus was recognized only by the most careful search for it. It does not have, in a child eight years old, a thickness which is more than the adult broad ligament, and it is only by looking at it closely that the outlines of the uterine cornua can be detected. With the broad ligament passing from each side, and with the growth and twisted pedicle, and active peritonitis obscuring the anatomy of the parts, the difficulty can be well understood. I merely mention this for the benefit of those who undertake a similar operation in the child.

Dr. Louis Frank: I have recently noticed report of the researches of Dr. Mary Dixon Jones as to the origin of all cystic tumors of the ovary, she claiming that they are due to inflammatory disease about the follicles, the tissues surrounding these follicles reverting to the embryonic type, and afterward there is development of these cysts. She claims this origin for all cystic tumors of the body, except, of course, the so-called occlusion or retention cysts. I do not know whether this theory will hold good or not.

The essay of the evening, "Epilepsy," was read by Thomas H. Baker, M. D. (See page 1.)

Discussion. Dr. H. A. Cottell: The author gives us a very clear account of the varieties of epilepsy, the etiology, pathology, prognosis, therapy, etc. The subject is one of the oldest known to medicine, and I know of no disease that is more puzzling, more difficult of treatment, and more disappointing.

The classification of epilepsy into grand mal, petit mal, and Jacksonian epilepsy does not seem to cover all varieties. Authorities allow another form, which has been called psychical epilepsy. For instance, the epileptic will have his attention called to something that he considers wrong or an outrage to his family, and he will go out and shoot down an innocent person (a perfect stranger to him, it may be) while in an epileptic state. I have seen such a case.

The etiology and pathology of epilepsy are difficult questions to solve; but in epilepsy following hemiplegia (Jacksonian epilepsy) or epilepsy due to exostoses, occasionally the surgeon may trephine and ascertain the cause. However, epilepsy, as a rule, is seemingly without cause. It strikes me that the neuron theory of the nervous system is going to throw light upon this question. It was my privilege to read a paper upon the neuron theory of the nervous system some time ago, and really this conception of the nervous system is very beautiful. A neuron is merely a nerve-cell with its branches, and these influence one another without ever touching, the influence being analogous to induction, as we see it in electricity. These neurons may get out of adjustment; they may shrink, their branches may draw in, and therefore not influence one another properly, and so there is a disturbance of function.

Where the seat of epilepsy is, nobody knows. It has been suggested that the lesion or derangement is most often in the medulla oblongata; I think it more likely to be in the cerebral cortex, in what we call the irritative centers. I have thought that the explosion which results in the spasm is something analogous to the explosion of Leyden jar.

A word or two about the treatment: We know that every thing in the materia medica has been used in the treatment of epilepsy, and practically in vain. I have seen one or two cases in children, the child being taken in hand promptly and treated with bromides in full doses, wherein the epilepsy has not returned for several years. Perhaps those cases may be called cured. Dr. Marvin now and then calls attention to a case he considers cured. We all know that epilepsy is practically an incurable disease, and when we have tried one set of remedies until they have lost their effect, we switch off to something else, and get a temporary amelioration of the symptoms.

About a year ago a drug called heroin was introduced into the materia medica; it came very much vaunted in the treatment of coughs; the elixir of heroin—it was also put up in pill form. In using this remedy in the coughs of epileptic patients I discovered it had quite an influence in controlling the spasms, in two cases at least. I have not seen any allusion to this fact in the literature of the subject, and wish to put myself on record as having observed it.

Dr. A. M. Vance: I know it to be a fact that in the Jacksonian variety of epilepsy, apparently due to some former injury to the skull, we often get most gratifying results from the rational application of

surgery. I would like to hear the neurologists discuss the feasibility of operating upon cases of so-called idiopathic epilepsy. I have seen reference recently made to trephining the skull in these cases, with the hope that the pressure effect would be relieved. I have done the operation several times where there was a history of previous injury given by the patient, without any very definite idea that I would find the cause to be traumatic, taking out quite a large piece of the skull without any beneficial results; but in Jacksonian epilepsy, with a definite history of injury, I have gotten gratifying results in a number of cases, one after twelve years' duration; another after five years. One man lived six years without a return of the spasms; the other man is still living and able to earn his living.

Dr. William Cheatham: I have seen three cases of epilepsy relieved by surgery. One was a good many years ago at the clinic of the University of Louisville, a colored woman who had severe epilepsy for years, where the cause seemed to be a shrunken globe. We gave her ether, and I have never seen anybody have a more severe convulsion than she had after she was under the influence of the anesthetic. After the eye was removed she had no more convulsions. This was a case of grand mal.

Another case was in a child; the post-nasal space was filled with adenoids, which were removed about a year ago, and there has been no return of the epilepsy.

Another case was a young man with a suppurating middle ear. His ear was curetted; he has been under observation for various reasons for several years, and has had no return of the epilepsy. His brother, who was off on a trip, commenced having epilepsy. He had a suppurating ear; I curetted his ear also, but it did not stop the convulsions.

This summer while in Philadelphia I saw Keen operate on a patient the second time for epilepsy. A young man, a farmer, had received a blow on the head; he later developed epilepsy, and Dr. Keen had lifted a large flap of bone, and the man had had no return of the seizures for a period of five years. In harnessing a horse one morning, in throwing the hames over the neck of the horse, one of the hames struck him on the head in the same spot; he again developed epilepsy, and Keen performed a second operation. No cause for the disease was found at either operation.

Dr. William Bailey: It is unfortunate in this disease that we have

no tracks, traces, or lesions that can be recognized often, except in the Jacksonian variety. In that I must say that I think surgery can accomplish a great deal, particularly since the days of localization have been better established, and I believe it is competent now in many cases of that form for surgery to give almost complete relief. I believe that in the young, where the nervous system is so susceptible, that oftentimes it may be, as it were, a reflex trouble; children with disturbances of the alimentary canal and other sources of irritation no doubt are capable of exciting this disease when we can not find any lesion in the brain, and hence in the management of these cases I think there is a necessity of correcting every departure from health; the very best possible health should be brought about and maintained by proper sanitary and hygienic surroundings.

I was a little surprised in enumerating the causes of epilepsy that alcohol was not more prominently mentioned; it was stated, but not in the first enumeration of the causes; either alcoholism in the person or perhaps the hereditary influence because of alcoholism in the parent. I believe that is a factor; that from alcoholic indulgence people are more liable to transmit the condition that results in epilepsy in the child.

As to the management, I think it is established that the bromides offer us better results than any other treatment can give. I do not believe it is necessary in these cases, as a rule, to disturb the general health by bromidism; the drug need not be pushed to that extent. I believe in the full and free use of drugs, and I believe a combination of the bromides better than any one of them, in full and free doses until there is interruption of the paroxysms, then only enough to keep up the influence; perhaps only one half or one third what was necessary to interrupt the paroxysms will be found necessary to maintain the patient with a reasonable degree of safety. The treatment ought to be continued for not less than two years, and it may be longer, or as long as may be necessary, by occasionally withdrawing the drug when there is evidence of bromidism. Patients rapidly recover from the effects of the bromides when withdrawn and they are properly fed, consequently I think bromide may be used without injury for a great length of time. Some of the other bromides than those mentioned, perhaps in connection with gold, might be serviceable. I also believe in certain cases opium has a great use in the treatment of epilepsy, and I am not surprised to hear Dr. Cottell mention the favorable influence

of heroin, as we know it has very positive value in some other directions; but the treatment for the Jacksonian variety is always surgical when localization can be made perfect and complete, as it can be in many cases; it offers us a great deal of hope in the treatment of such cases as are not susceptible to medical measures. It is more difficult to control Jacksonian epilepsy by bromide or any constitutional medication than any other form of the disease, and only surgery can give relief, in my judgment, in these cases.

Dr. B. C. Frazier: There is one condition that has not been mentioned in the management of these cases, especially those of petit mal, and that is to try to influence these patients to take the condition as brightly as possible; to tell them that they understand a great many people go through life having this serious disease, at the same time they are useful citizens a large part of the time and able to attend to their business. One reason I take it that Dr. Baker had for mentioning that these patients become demented finally, is that they become melancholy over the disease. The reason for this is that people look upon epilepsy as being more horrible than it really is. Frequently people suffering from epilepsy may be greatly benefited by a plain talk, getting them to realize that the disease is not as serious as they have been led to believe.

Dr. J. G. Cecil: With special reference to the treatment, which I would like to emphasize, I do not differ in any sense from the views expressed by the essayist, or those who have already spoken; but there is one feature in the management of these cases that I think ought to be emphasized, that is, the earlier it may be instituted, the more vigorously it may be kept up, the better will be the results in a certain number of cases. Some we recognize as entirely inoperable, incurable; no treatment has any effect; but some of them do undoubtedly respond to treatment. It is as necessary in favorable cases that we recognize the fact that the tendency is for the convulsions to become closer and closer together, and the condition becomes just that much worse. We should emphasize this fact to parents of children and to friends of persons so afflicted, that they ought to have the benefit of treatment to get them as far as possible under the influence of such medicines or agents as we have at our command, in order to avoid and possibly entirely do away with the so-called habit of epilepsy. It is undoubtedly true that persons get into the epileptic habit under certain circumstances, and the oftener these convulsions take place the more firmly will be estab-

lished the habit. And of course the longer this continues, the more incurable will be the case. If, then, we emphasize the necessity of vigorous treatment, and insist upon its being carried out, we will have done our full duty. I do not believe there is any thing that has been discovered that is preferable to a combination of the bromides, in connection with such other remedies as may be found to have a favorable influence, and if we insist upon this many cases will be saved from final dementia and loss of life by early, persistent, and prolonged treatment.

Certainly in some instances of Jacksonian epilepsy prompt removal of the cause will be followed by a cure. In others, of course, it is not. But the chances for a cure will be better the nearer the operation is to the time of the injury.

Dr. Curran Pope:* This has been an interesting subject to me for the past ten years. If we can out of the gloom and chaos which surrounds epilepsy try and reach some clear point with regard to the possible pathology, many of the points become clearer, and the therapeutics of the disease is changed to a great extent. I simply voice the consensus of opinion of neurologists in saying that we have to deal with a gliosis of the cerebral cortex of epileptics.

When an epileptic comes to me I try to look at him as a burdened person, and the sooner we can lift the burdens from him the better it is. This includes the correction of all exciting causes; and particularly in this connection I think it is essential to correct all ocular defects, and any other medical or surgical disease that may exist. When we have gone this far we have placed our patient in the most favorable condition to overcome the disease.

It has seemed to me, particularly in recent years, that the toxemic theory is a possible explanation of why convulsions occur in epilepsy. We find that the epileptic's blood becomes charged with toxemic substances, which, circulating through the cortex and acting upon the neurons, bring about a condition of convulsion, and we have a paroxysm of either grand mal or petit mal. It seems to me with this conception of the disease the therapeusis becomes more clear, and that this idea offers a reasonable explanation why proper attention to the alimentary canal is productive of good results, as we are constantly eliminating toxemic material by relieving the alimentary canal. More important than watching the alimentary canal, however, I believe, is watching the excrementitious products of the urine. I

*Present by invitation.

believe it is here that we are coming nearer the indications than in any other portion of the body. From my examination of the urine of patients suffering from epilepsy, I have found that the institution of eliminative measures has done more to check the paroxysms of epilepsy than the administration of bromides.

I have just recently had a case which has taught me a good lesson; taught me to be much more cautious concerning the surgical aspect of epilepsy than I have ever been before. I have had under my care a little boy from Indiana that had the most typical Jacksonian epilepsy that it ever fell to my lot to see. He had the aura, failure to lose consciousness, involvement of the right arm, commencing in the thumb and hand, spreading to the leg, etc. I told the parents the first time I saw the boy that I would like to have them bring him to Louisville to be operated upon. Before the operation was performed I undertook to study the case for a week. Meantime I instituted treatment to put him in the best possible condition for the operation. I stopped the bromides, opened his bowels and skin, and to my utter surprise the convulsions entirely ceased. He had been taking from 120 to 240 grains of bromide a day; his face was covered with acne, and he was in a miserable condition. He has been under my care now eight weeks, and has had but one attack since he came here. He has been given a little calomel every week or two, but no other medical treatment. It seems to me the explanation in this case is that with removal of the toxine irritation of the neurons ceased, and the epileptic convulsions naturally stopped.

I of course believe that of the medicinal measures, bromides offer the best hope, but I also firmly believe that the bromides are administered too much and too frequently, and they are not as carefully guarded by eliminative measures as they should be.

I have lately used the supra-renal capsule in grain doses in these cases, and it has seemed to me to be of some service. I do not know what the outcome will be. Of course, like most others, I have tried almost every drug in the treatment of these cases. In some instances, probably where extreme gliosis has taken place, we get very unsatisfactory results. But in young people, and in those persons who have not reached a point where the connective tissue is apt to increase so rapidly, there is a very fair chance of recovery.

I do not know how we should determine the question as to whether a case of epilepsy is cured or not. It has always seemed to me that

two years without a convulsion was ample time. If the patient has been two years without an attack, he ought to pass from under the surveillance of the physician.

Dr. Louis Frank: I object to the theory Dr. Cecil advances, that of the epileptic habit. I do not believe that such a thing as the epileptic habit can be established, unless it be due to marked changes which take place in the nerve cells themselves, and then the disease has reached such a stage that it is beyond repair; by operative or other means we do not cure the condition, just as we have in diseases of other structures. It is not really a habit, but advance of the disease with destruction of the nerve cells.

Bearing upon the point mentioned by Dr. Frazier, the usefulness to society of these people; it strikes me there is some question about this, whether these people can legally and legitimately conduct business transactions.

Dr. T. H. Baker: I stated at the outset that while there was nothing original in the paper, I hoped that a full discussion would be elicited. That result has been attained, and I thank the Fellows for their consideration of the essay.

Case of Diabetes Mellitus. Dr. T. H. Stucky: If it is in order, I would like to report a case of diabetes which I think is a little unique. The point that I desire especially to mention is the fact that the man has passed one hundred and five ounces of urine in twenty-four hours, which is not so exorbitant, specific gravity 1052; estimated amount of sugar passed, twenty-four and a half ounces in the twenty-four hours. Looking up the records, I find that as much as two pounds have been passed, and even more. This quantitative estimation or analysis was made by two different persons, both of them reaching identically the same conclusions.

The patient is a young man from Virginia. I saw him a week ago for the first time, with this history, that he had been feeling very "heavy," with a great deal of hebetude; that he had the "sleepy disease." Upon examination it was ascertained he was habitually constipated, and at that time there had been no movement of the bowels for eight days. After thoroughly emptying the bowels by enemata and salines, the first examination of the urine was made. There has been no attention paid to direct treatment, except correction of some digestive disturbance. The specific gravity of his urine to-day was 1044

under the eliminative principle. He states that he has lost thirty pounds in weight in the last eight months.

Another peculiar thing about the case is the absence of thirst, notwithstanding this great amount of elimination and his general condition.

I simply mention the amount of sugar as being a little out of the ordinary.

Discussion. Dr. H. A. Cottell: I do not see any thing particularly remarkable about the case. The urine of diabetics is always of high specific gravity, sometimes as much as 1060.

Dr. B. C. Frazier: I judge that the prognosis is bad in a case such as Dr. Stucky has reported. Where diabetes develops under thirty years, the patient usually soon succumbs.

Dr. T. H. Stucky: I am going to put this patient upon the bromide of gold and arsenic, arsenauo, and push it to toxicity, basing the treatment upon the experience I have had in several cases, one that I recall especially who had had diabetes for three or four years, a man thirty-six years of age, who had lost a great deal of flesh. He has been under treatment now about a year. I started him on eight drops of the bromide of gold and arsenic, arsenauo, and pushed it to ninety drops three times a day until I secured decided evidences of arsenious toxicity; the result has been that the specific gravity of his urine has ranged within the last four months between 1026 and 1034, with an average for six months of about 1028. He has gained twelve or fifteen pounds in weight. He is a traveling man, and I received a letter from him yesterday stating that he never felt better than he did at the time of writing, that his general condition was greatly improved, and asking if he could not discontinue the drug. During this period the drug was stopped for two or three weeks, when there was an increase in the specific gravity of his urine and an increase in the amount of sugar.

Attention was directed to the use of this agent in such cases by an article written by Dr. Ferguson, of New York.

B. A. ALLAN, M. D., *Secretary.*

**COLLEGE OF PHYSICIANS OF PHILADELPHIA—SECTION ON
OPHTHALMOLOGY.**

Meeting November 20, 1900, Dr. S. D. Risley, Acting Chairman, in the Chair.

Dr. S. D. Risley exhibited a case of abscess of the orbit following injury, which proved to be associated with an opening into the ethmoidal cells, thus furnishing another illustration of the fact that suppurative disease of the orbit is usually associated with disease of one or more of the contiguous sinuses. The patient applied for treatment at the Wills Eye Hospital two days after a blow upon the nasal aspect of the upper eye-lid by a piece of flying metal. The upper lid was edematous, the conjunctiva chemotic, marked exophthalmos, and an almost fixed globe, only slight rotation inward remaining. Under cold compresses the pain promptly ceased, and the edema of the lids and exophthalmos disappeared, leaving only a point of tenderness at the upper and inner angle of the orbit. On the fifth day fluctuation was present, and a deep incision into the orbit was followed by profuse discharge of pus. A probe passed without resistance deeply into the orbit, showing a large area of denuded bone. The cavity was injected with peroxide of hydrogen solution, and subsequently cleansed twice daily with saturated solution of boracic acid. The solutions passed freely into the nostril. Suppuration ceased after the first treatment, and the wound healed without reaction or further suppuration. Mobility of the ball at the end of two weeks was completely restored, and no tenderness remained. Dr. Risley found it difficult to explain the presence of the denuded bone, the opening into the ethmoidal cells, and the orbital suppuration following so speedily after the slight injury the boy received. There was no discoverable evidence in the nose of the ethmoidal disease having existed prior to the accident.

Drs. W. C. Posey and E. A. Shumway reported a case of papilloma of the caruncle. Although regarded by the text-books as a common affection, the authors were able to find but five cases with satisfactory microscopical description, to which they added the sixth. The patient, a man sixty years of age, presented a mulberry-shaped growth attached by a pedicle to the right caruncle, and two similar growths on the palpebral conjunctiva near the lid margin. The growths were excised, and the loss of tissue replaced by a flap from the forehead. The resultant scar was slight, and no recurrence has taken place, a year

after operation. Microscopical examination showed a pedicle of connective tissue attached to the caruncle, from which proceeded numerous branches, each covered with a thick mantle of epithelial cells. The axial connective tissue was embryonal in character, and contained thin-walled blood-vessels. The caruncle showed a marked increase of the lymphoid cells found normally beneath the surface, and further irritation of the tissue was evidenced by the presence of numerous goblet cells in the epithelium covering the caruncle, and in the mantles of cells composing the tumor. There was no extension of the growth beneath the surface of the caruncle. As malignant tumors clinically resembling papillomata, although anatomically quite distinct, are found in this situation, the authors believe that complete excision with cauterization of the base should always be advised.

Discussion. Dr. de Schweinitz referred to a case of papilloma springing from the plica semilunaris which he had removed in April last. After excising the growth, the base was cauterized with sulphate of zinc. There had been no recurrence. Dr. Randall exhibited a young colored boy from whom he had removed a few hours previously a small pigmented growth of the plica, which, when first seen, had the appearance of a foreign body. Dr. Veasey excised a growth of caruncle several years ago which presented clinically the appearance of papilloma, but microscopically was shown to be a primary sarcoma. In another case a small reddish tumor about the size of a pin-head was shown under the microscope to be a cystic adenoma.

Dr. G. E. de Schweinitz described two cases of intra-ocular metallic foreign bodies which had been localized with the X-rays according to Sweet's method. In the one case the body was firmly imbedded in a mass of cicatricial tissue behind the ciliary body, where it had been for ten months, and although the magnet came in contact with the fragment it could not be moved. The eye was therefore enucleated, as sympathetic irritation had already set in. In the second case the foreign body was of unusual size, weighing twenty-seven centigrammes, and was easily removed about twenty-four hours after the accident. The collapsed eyeball was filled with physiological salt solution, the wound closed with catgut sutures, and there was uninterrupted recovery; that is to say, the eyeball was saved, although, of course, the vision was greatly depreciated, being only light-perception, chiefly upon the nasal side of the field. He dwelt upon the uselessness of attempting to

extract foreign bodies with the magnet if they had been long imbedded, on account of the firm adhesions which necessarily are formed, and urged the importance of prompt surgical intervention after accidents of this character, stating his belief that it is imperative that eyes in which there was the least suspicion of a foreign body should be submitted to expert examination, if necessary aided by the X-rays, so that no time shall be lost in localizing and extracting the foreign substance.

Dr. de Schweinitz also read a paper on "A Word Concerning the Etiological Relationship of Epidemic Influenza to Chronic Glaucoma." After referring to the observation which has been made by several authors that there is an increased frequency of glaucoma during seasons in which influenza has manifested itself with unusual severity, he related a case of bilateral retrobulbar neuritis caused by this disease, in which he had observed the gradual formation of a cup in the optic nerve closely simulating that seen in so-called chronic or simple glaucoma. He suggested, therefore, that as a number of observations had shown that optic neuritis precedes plus tension and conduces to cupping of the disk, the retrobulbar neuritis of influenza might play this role and account for the etiological relationship that has been described.

Discussion. Dr. Fenton referred to a patient he had seen six days after the beginning of an attack diagnosed by the attending physician as influenza, and found one eye of stony hardness, with cloudiness of the media, while the other eye exhibited chronic glaucoma. He believed that the super-intoxication of influenza induced glaucoma in eyes predisposed to the disease. Dr. Risley believed that granular changes in the macular region were often present in influenza, although he had never seen glaucoma associated with the affection.

Dr. M. W. Zimmerman reported a case of left lateral homonymous hemianopsia, and subsequent marked partial reversal of the color and form limits in a female domestic, aged twenty-five years, with fair general health and no history of injury. There had been a few epileptoid convulsions before and after admission to the Germantown Hospital, on June 3, 1899, apparently associated with delayed and painful menstruation. There was a retroverted and fixed uterus, but very little ovarian tenderness. The defect in the visual fields persisted for nearly a month, and for a time was accompanied by various extravagant hallucinations. With improvement of the pelvic conditions and general health all symptoms disappeared. Central vision had never been

impaired, and there were no lesions of the media or eye-grounds. Sixteen months after leaving the hospital the patient reported good health and no eye symptoms. The diagnosis of hysteria seemed justified by the temporary character of the visual defect, the peripheral contraction in the retained fields, and the marked reversal of form and colors after recovery; also by the close association with menstrual disorder and absence of central organic disease.

Discussion. Dr. de Schweinitz said that he had been under the impression that hemianopsia was rare in hysteria, and was still of this opinion, notwithstanding that in a recent conversation a noted neurologist advised him that it was not an uncommon condition. In an experience extending over many years in the recording of fields of hysterical patients he had seen but three cases, only two of which, however, exhibited typical hemianopic fields.

Dr. C. A. Veasey reported a case of traumatic luxation of the crystalline lens; secondary glaucoma; extraction without loss of vitreous; recovery with normal vision. The lens had practically made a quarter turn upon its axis, causing the edge to point directly forward, dividing the anterior chamber into two halves, and lying against the posterior surface of the cornea. Under ether, a Bowman's needle was thrust through the cornea near the center of the upper inner quadrant and entered into the dislocated lens sufficiently far from the anterior edge to retain a firm hold without tearing loose. Using the cornea as a fulcrum, the handle of the needle was now brought forward and upward and held in this position by an assistant, thus depressing the lens directly downward and backward into the pupillary space until sufficient room had been cleared to allow the making of a downward section. Through the section a wire loop was introduced beside the lens, and by the combined movement of the transfixing needle at the time of its withdrawal and a quarter turn of the loop the lens was made to lie flatwise, and was delivered without the loss of vitreous. With correcting lenses vision equaled $\frac{5}{6}$, and Jaeger No. 1 was read.

Dr. H. F. Hansell reported a case of hemorrhage from the conjunctiva in an infant. The child at birth weighed three and a half pounds, and was exceedingly puny and frail. For several days following birth there was a slight purulent discharge from the conjunctiva of both lids that disappeared under treatment by irrigation and mild antiseptics. Two weeks after birth bleeding from the conjunctiva com-

menced, and continued for five days. The bleeding did not proceed from any one point, but oozed from the entire conjunctival surface of the left upper lid without cessation day or night. There was no anatomical change in the conjunctiva like that reported by Stoewer and others. The blood count showed 5,400,000 red and 5,600 white corpuscles; the percentage of hemoglobin could not be determined. The infant was put into an incubator and the temperature maintained at 99° F.; its own temperature varied from 97° F. to 104.4° F. Careful feeding and stimulants failed to kindle the feeble spark of life, and after existing five weeks it died. He thought that death was due to the premature birth, marasmus and undeveloped bodily organs, and not to the loss of blood from the conjunctiva.

Discussion. Dr. de Schweinitz recalled two cases, one of which he had previously reported. The other case occurred in a colored child two weeks old, the hemorrhage coming from an isolated point on the bulbar conjunctiva of upper lid. After the usual styptics had failed to arrest hemorrhage, the bleeding point was picked up with hemostatic forceps. There was recurrence later, but recovery ultimately ensued. A few ecchymotic spots were found upon the body. In reply to a question, Dr. Hansell stated that it was uncommon to find the hemorrhage from isolated points, unless there was an organic lesion of the conjunctiva, but rather a leakage from the entire palpebral surfaces; oozing from the conjunctival surface being usually present.

WILLIAM M. SWEET, *Clerk of Section.*

BRASHEAR MEDICAL SOCIETY.

Brashear Medical Society met in Bloomfield, October 16, 1900, with the following members present: J. J. Wakefield and I. B. Crume, Bloomfield; A. G. Blincoe, Bardstown; W. E. Shepherd and Wiley Rogers, Taylorsville; W. W. Ray, J. C. Mudd, and J. H. Lampton, Springfield; W. W. Coleman, Mount Washington; J. G. Powers, Fairfield; J. W. Baird, Chaplin, and E. William, of Little Mount. The minutes of the previous meeting were read and adopted, and the reports of the various committees received.

Dr. A. G. Blincoe read an interesting biographical sketch of Dr. Walter Brashear, for whom the society was named. Dr. Ray read an excellent paper on practical trifles; Dr. Coleman read a paper on frac-

tures; Dr. Shepherd reported a surgical case which was under treatment, and was requested to report its progress at the next meeting; Dr. Blincoe read a paper on Some Facts and Fancies About Eye-strain; Dr. Gore brought up the subject for discussion, "What Shall We Prescribe?" Drs. Rogers, Blincoe, and Gore were appointed a Committee on Essays for the next meeting, which will be held at Bardstown, January 15, 1901. The Secretary was ordered to procure a suitable badge for the members of the society. This society is one of the flourishing county societies, and has thirty members. Many other counties in the State could well afford to follow the good example of the physicians of "old Nelson." A vote of thanks was tendered the Committee of Arrangements for the very excellent manner in which the society was entertained.

Reviews and Bibliography.

Physician's Manual of Therapeutics. Published by Parke, Davis & Co., Detroit, Mich. 1900.

This manual is something new in its line, as it places before the prescriber a means of perceiving at a glance all the available forms or pharmaceutical preparations of any drug now in vogue. It contains dose tables, also tables of equivalent weights and measures, and many valuable features. The book will fill a long-felt want, and we believe the profession will appreciate the gift of this well-known firm.

A Text-Book on Practical Obstetrics. By EGBERT H. GRANDIN, M. D., Gynecologist to the Columbian Hospital; Consulting Gynecologist to the French Hospital, Fellow of the American Gynecological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc. With the collaboration of GEORGE W. JARMAN, M. D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the New York Obstetrical Society, etc. Rewritten, newly indexed, and considerably enlarged. Illustrated with sixty-four full-page photographic plates and eighty-six illustrations in the text. 461 royal octavo pages. Prices, net, \$4.00, cloth; \$4.75, sheep. Delivered.

The last decade has witnessed not alone progress in the practice of obstetrics, but also change in methods of instructions. The clinical teacher is no longer satisfied with grounding his students in the theory of art, but he aims, as far as his opportunities will allow, to give his classes that practical instruction which alone enables them to follow understandingly the normal course of pregnancy and of labor, as also to recognize and to

cope with the emergencies. The teaching of obstetrics, therefore, has very properly become more practical and less theoretical. This is the inevitable outcome of that higher medical education which aims at thorough grounding in every science before the student is deemed competent to practice. Above all are such methods requisite in the science we are dealing with, since familiarity with the phenomena of pregnancy and of labor, and of the puerperal state, as witnessed in the living and at the bedside, best fits the student for the great responsibilities of his chosen calling. This is one of the best works on obstetrics in the language. Its exposition of the subject is strong, clear, distinct, and broad.

The Treatment of Fractures. By W. L. ESTES, A. M., M. D., Director, Physician, and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. Published by the International Journal of Surgery Co., Medical Publishers, 100 William Street, New York.

This volume, of a little over two hundred pages, is nicely illustrated and is well written. It is a series of papers printed in the *International Journal of Surgery*, and now published in book form. Special attention has been given to the X-ray diagnosis. We consider it a good manual, and will fill the place for which it was intended.

Anders' Practice of Medicine. Fourth edition, revised. A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Handsome octavo, 1,292 pages, fully illustrated. Cloth, \$5.50, net; sheep or half morocco, \$6.50, net. Philadelphia and London: W. B. Saunders & Co.

Dr. Anders needs no introduction to the medical profession, and the fourth edition of his superb work on the practice of medicine will be welcomed by all members of the healing art. All that is modern is found in this book, and it is of itself a library. The details of the bacteriological portion of this work are most excellent, and of itself commends the work to every student of medicine. The work contains every thing that is new, and is right up to date. We commend it to our readers as being one of the best books of its kind that has been presented to the profession for years.

The Practice of Medicine. A Text-Book for Practitioners and Students. With Special Reference to Diagnosis and Treatment. By JAMES TYSON, M. D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians, Philadelphia; Member of the Association of American Physicians, etc. Second revised edition. Thoroughly revised, and in parts rewritten, with one hundred and twenty-seven illustrations, including colored plates. Philadelphia: P. Blakiston's Son & Co. 1900.

This book, the second edition, is, if any thing, a better one than the first. It is fully abreast with the most exact status of current medical and scientific thought and observation of the day. Of course, many important additions and corrections have been made. Changes will be found espe-

cially in the sections on the infectious diseases and diseases of the nervous system. We live in a progressive age, and additions are constantly being made, necessitated by the ever-moving energy of intellectual reflection and observation. Revision and enlargement in the domain of medicine can not, must not, and in the present work does not, even have the shadow of retrogression, but, on the contrary, mirrors the most advanced thought and observations. A prince in his line especially, it can be said in reference to diseases of the nervous system that they have been elaborated in a manner that can not but enhance the work's usefulness and prove a boon both to student and aged practitioner. The same may be said of the consideration that is given to diseases of the blood. Now, while these things are especially pleasing to the readers or reviewers, as you may choose to call us, they are only secondary, in the writer's opinion, to the more practical portion of the work. The infectious diseases are considered first. Why? Because when one is sick with one of these he needs the best thought and careful attention of his trusted medical adviser, and it is germane that these subjects should receive the best as well as the first consideration of an author. Diseases of the digestive system are next considered, and then follows a splendid discourse on the respiratory diseases. These three classes of diseases are the ones that more frequently engage the apt and ready knowledge of a doctor than all the other ills that afflict the human family. But in this notice, while we give prominence to the admirable way in which the above are considered, allow us to say that diseases of the heart, blood-vessels, blood, and blood-making glands, the diseases of the urinary organs, etc., are handled in no less satisfactory manner. The illustrations and general make up of the book are fine. As a result of a careful reading of the volume before us, we have come to the conclusion that Tyson's Practice of Medicine is one of the best works on the subject that has appeared in our mother tongue.

Care of the Consumptive and a Consideration of the Scientific Use of Natural Therapeutic Agencies in the Prevention and Cure of Consumption. With a Chapter on Colorado as a Resort for Invalids. By CHARLES FOX GARDINER, M. D., Non-Resident Fellow of the New York Academy of Medicine; Member of the American Climatological Association. G. P. Putnam's Sons, New York and London. The Knickerbocker Press. 1900.

This is a small book of some two hundred pages, and is devoted to a detailed account of the climate of Colorado and the care of consumptives in general, and especially those who go to Colorado. It is a most excellent little book, and is well worth consideration by both the laity and the profession, as it contains much valuable practical information.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNĀ."

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No. 1.

H. A. COTTELL, M. D., M. F. COOMES, A. M., M. D., Editors.

ERNEST G. MARK, A. B., M. D., and JOHN R. WATHEN, A. B., M. D., Assistant Editors.

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JOHN P. MORTON & COMPANY, Louisville, Ky.

CITY HEALTH DEPARTMENT.

If those in authority do their duty the Louisville Health Department will be put on a proper basis, and will be a credit to the city.

We feel assured that the honorable Mayor will lend his most earnest efforts to protect the citizens of this fair city from the dangers of disease and pestilence of all kinds. The responsibilities of the chief executive of a great city like Louisville are very onerous, and at times he is sorely tried in endeavoring to do his duty. It requires cool judgment and a determination to do what is best for all concerned, and we believe that Mayor Weaver will not disappoint the public in their expectations in this particular instance.

THE HOSPITAL OF THE UNIVERSITY OF LOUISVILLE.

This old and time-honored institution has now a first-class hospital, thoroughly equipped in every particular. It is open now to the reception of patients. It has large and commodious wards, as well as large and elegantly appointed private rooms where patients can have all the luxuries to be found in any hospital or infirmary in this country.

The faculty of the University need no introduction to the readers

of the Practitioner and News, and the alumni of this school will rejoice to know that this essential acquisition has been added to their Alma Mater.

DR. ERNEST G. MARK.

Dr. Ernest G. Mark, a member of our editorial staff, has located in Kansas City, Mo., to practice medicine. We regret very much that Dr. Mark found it necessary to leave Louisville, as he had a bright future here, and was one of the most promising of the younger set of physicians in this city. We commend him to the good people of his adopted city, and feel sure that our loss will be their gain.

Special Notices.

The usefulness of GOOD Hypophosphites in pulmonary and strumous affections is generally agreed upon by the profession.

We commend to the notice of our readers the advertisement of Robinson-Pettet Co. in this issue. "ROBINSON'S HYPOPHOSPHITES," also "ROBINSON'S HYPOPHOSPHITES WITH WILD CHERRY BARK (this is a new combination and will be found very valuable) are elegant and uniformly active preparations; the presence in them of quinine, strychnine, iron, etc., adding highly to their tonic value.

HUNTER MCGUIRE'S OPINION.—The late Hunter McGuire, the most celebrated surgeon of his time in the United States, if not in the world, was asked for his opinion of antikamnia by Dr. Thomas C. Haley, of Riceville, Va. Dr. Haley, in writing of this circumstance to The Antikamnia Chemical Company, says as follows :

"I recently wrote to Dr. McGuire and gave him my experience with antikamnia in my own case and that of others. Of myself, I said that I had been using the five-grain tablets for four or five years consecutively, and always with great and signal relief to my sufferings. I vouched for it as being the grandest succedaneum for morphia. While I entertained these opinions personally, I still felt that the quantity taken should be justified by consultation. Hence the letter to Dr. McGuire, and I am pleased to hand you herewith his reply."

The following is Dr. McGuire's reply :
Thos. C. Haley, M. D.

St. Luke's Home, Richmond, Va., Nov. 8, 1894.

My Dear Doctor : I don't see any reason why you shouldn't continue to take the remedy (Antikamnia Tablets) of which you speak, and which has done you so much good. I don't believe it will do you any harm. With kind regards and best wishes,

Very truly yours, (Signed) HUNTER MCGUIRE.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNÆ."

VOL. XXXI.

LOUISVILLE, KY., JANUARY 15, 1901.

No. 2.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

SEQUELÆ OF SCARLET FEVER: PREVENTION AND TREATMENT.*

BY JOHN G. CECIL, B. S., M. D.

Professor Materia Medica, Therapeutics, and Public Hygiene, University of Louisville.

The clinical aspects of scarlet fever are varied; at times it is a complaint so trivial that the patient is not confined to the bed or the house, taxing to the utmost the skill of the diagnostician, the diagnosis being more difficult than the treatment. Again it is seen one of the most malignant of acute diseases, striking the patient down as if by a blow; in such the diagnosis may be easy, but treatment of no avail. Not infrequently the sequelæ are more disastrous in the consequences and lasting impressions than is the disease itself, often following in the wake of a light attack. We have only to call to mind many of the blind, deaf and dumb, the halt and lame, the unsightly and disfiguring scars about the neck, and instances of chronic Bright's disease attributable too often to the sequelæ of scarlatina; many times after convalescence is well established, and all thought of danger passed, do these sequelæ first present themselves. A difficult problem indeed is it to impress upon the minds of the parents and nurses of these little patients the imperative necessity of watchful care and attention long after the bolder symptoms have passed.

While it is true scarlet fever is not materially modified in its severity nor shortened in its course by any specific treatment, there is very much that may be done by the attendants in preventing the development of its sequelæ. When possible, the physician in attend-

* Read before the Louisville Medico-Chirurgical Society, December 7, 1900. For discussion see p. 53.

ance should have a specialist associated with him in the management of severe cases. When such desirable association is not at hand, the doctor should be a self-constituted specialist and give his personal attention to such details in the management as will promote a complete and perfect cure. Some of these sequelæ are preventable, some may be modified in their severity, some can not be controlled nor prevented, but assuredly none should occur through neglect to use every precautionary measure known to medical science.

It is a well-known but none the less lamentable fact that the laity do not appreciate preventive medicine or measures. This is not only true of individuals, but of States and municipalities as well. It is neither necessary nor possible in this paper that all the sequelæ of scarlet fever should be enumerated; it will be more profitable to confine attention to the more common and important.

Renal Complications and Sequelæ. The cloudy swelling of the kidneys, with greatly diminished quantity of urine, which is albuminous, of high specific gravity and loaded with urates, phosphates, etc., is constant in the early stages of pronounced cases of scarlet fever, as it is in many other acute infectious diseases. This condition should give little uneasiness, as it speedily clears up under the free use of diluent drinks, by the time the febrile symptoms have abated. The acute parenchymatous nephritis which so frequently develops from two to eight weeks after the subsidence of the fever and the disappearance of the rash is due to a mixed infection, or to this associated with exposure to cold and dampness. It is unnecessary to develop this familiar subject; the result would be a dissertation on acute Bright's disease, and the treatment is the treatment of that disease, no matter how caused. The matter of prevention must engage our attention.

First, we should give the strictest injunctions as to exposures for two or three months after the attack; this is particularly necessary during those winter and spring months when scarlet fever is generally prevalent. The clothing of the patient should receive especial attention; woolen underwear is preferable, and the feet should be well protected. Next, I have great confidence in the protective value of the homely and time-honored practice of inunction with fatty substances. It is my practice, and I have never had reason to regret it, to begin inunction with sweet or olive oil, lard, coco butter, mutton tallow, or vaseline as soon as the rash appears, and to continue its use following the bath for weeks after. It relieves itching, prevents the scales from

flying, and protects the surface. After desquamation the skin is tender, sensitive, and very susceptible to chill, and nothing will serve so well in its stead as a protective agent. By controlling the excess of fever, by the use of diuretics and diluent drinks, by the use of mild purgatives, preferably the salines, by the use of disinfecting sprays, gargles, and applications to the ulcerated tonsils, pharynx, and nasal cavity, we can modify the course of the disease to a limited extent, and undoubtedly prevent the absorption of noxious agents which are the source of mixed infection, and which, as stated above, play such an important rôle in the development of kidney trouble. The prognosis in post-scarlatinal nephritis is better than when produced by other common causes; the treatment should be active, vigorous, and persistent along the lines recognized as being efficient.

Cervical adenitis and middle-ear disease can, in a measure at least, be prevented and their extension and course modified by zealous care and attention to the throat and nose. The ulcerated throat is almost as characteristic and as constant a manifestation of scarlatina as is the rash. It is from this source that much of the septic absorption takes place, and trouble in the ears, eyes, cervical glands, and the system generally follows. It is well worth the time and the trouble to do all that can be done to prevent this absorption. A cleansing spray in the throat and nose of Dobell's solution or any other simple disinfecting solution will do much to prevent the accumulation and absorption of septic material from this source. The application by mop to the ulcerated surfaces of Loeffler's solution or hydrogen peroxide diluted with water and carrying a small per cent of bichloride of mercury will be of great benefit.

When the cervical glands become tender and swollen, as will often happen, despite our endeavors to prevent, hot fomentations, poultices, the mercurial or iodide of potash ointment will generally cause their dissipation. If suppuration takes place, then the gland must be opened as soon as pus present can be diagnosed.

When the middle ear suppurates, the drum membrane should be punctured under cocain as soon as this fact is determined. The auditory canal must be kept free and open, free drainage encouraged and maintained. The assistance of a specialist is very important and necessary in situations of this kind.

The eyes should be protected from strong light; reading or any close application of sight must be prohibited during height of fever and

for some weeks after. Should inflammation set up, soothing lotions and disinfectants must be used with persistent regularity and thoroughness.

Scarlatinal arthritis, or, as it is more commonly called, scarlatinal rheumatism, is not really a rheumatism, but a condition similar to the so-called gonorrheal rheumatism. It is probably an acute arthritis produced by the mixed infection and not by a true rheumatic poison. It is likely to be mon-articular, and shows a decided tendency to supuration, in these respects differing from the course of true rheumatism. If we can prevent the mixed infection, we probably will forestall the arthritis. In the event of its occurrence the treatment is identical with similar conditions of other origin. The joint should be freely opened and drained.

Heart weakness and failure become at times urgent and alarming. It is my practice to forestall this by the administration of strychnin, iron, and quinin, and whisky in nearly all serious cases when any tendency of this nature is manifested. It is well to begin the use of such remedies during the course of the fever or at the time of its subsidence. Not infrequently during desquamation for two or three weeks after the acute stages are past we have a little fever, generally of the septic type, which often continues with annoying persistence, and is not infrequently misdiagnosed as malarial or typhoid fever. Diligent and painstaking search most often shows this to be due to suppuration in the nasal, post-nasal spaces, deep-seated cervical glands, or in the middle ear; appropriate treatment as before indicated will usually suffice to check it.

Of nervous complications chorea occasionally comes on in association with heart and joint troubles. It is probable that this same mixed infection is responsible for this, as it is of so many other sequelæ. Hence, allow me once more to urge the importance of prevention by the care that is bestowed upon free elimination of poisons from all emunctories, and by the persistent use of cleansing and disinfecting agents. Chorea is to be treated by prolonged use of arsenic, iron, and strychnin.

LOUISVILLE.

FISSURE IN ANO.*

BY T. W. STONE, M. D.

The lesion known by the above name is with most older authorities the same pathological condition called irritable ulcer, though recent investigations have proven them to be different. I will not take the time of the Association in discussing this point nor in elaborate anatomy and pathology, but will try to confine myself, in the short time that I shall take, to something more profitable.

A fissure proper is found at the verge of the anus, though, of course, it must come within the grasp of the external sphincter to produce that ever-annoying symptom of pain.

It has its birth in some traumatism, scratching with patient's fingernails, passage of hard feces, etc. It, including its kinsman ulcer, is the most frequent of rectal diseases, unless it be internal hemorrhoids, and is found in all, from the babe to the aged, though those in middle life suffer more.

Fissure may and often does complicate other diseases of the rectum, but when a patient comes to us with that characteristic pain with the other symptoms accompanying it, you may always look for a fissure, whatever else may be present. There may be some smarting and burning during defecation, but the pain, which is that of sticking a knife into the flesh, comes on afterward, and after a while eases to an ache, which may last several hours. It causes more pain in proportion to the solution of continuity than any other trouble, and it is for this one symptom that the practitioner is usually consulted. A thorough examination with an eye to treatment should always be asked for, and I for one have long since quit looking wise and saying "piles," writing a prescription for opium and galls, and telling my patient you will be well soon.

Given a patient that comes to us and upon examination we find him to be a sufferer from my text, what shall we do for him?

Treatment resolves itself into two forms, operative and palliative. The first is the more preferable, but can only be done by the use of an anesthetic and confinement in bed for several days, to wit: Have

* Read before the Warren County Medical Society at Bowling Green, January 12, 1901. (Reported by Dr. John H. Blackburn, Secretary.)

your patient take a purgative, and the next day, while well under the influence of an anesthetic, divulse the sphincter thoroughly. It is needless for me to say how, for you have each one done it many times. Now, as I have said, this is more preferable, and is an ideal treatment; but in my experience it sounds too great for most patients, and they go away from your office never to return to consult you on the subject again, and perhaps upon no other. For this reason, where I can not do the operative work, I have fallen on the following palliative or office plan of treatment which, though it does not have that surgical ring, yet in my hands has proven entirely satisfactory, requiring no more work nor expense, still pays as well and your patients are just as grateful, and it gives you a better chance to win him permanently. The marginal fissure is most amenable to this treatment, though the ulcer yields nicely to it. Indeed, Mathews reports one case cured by mere examination; that is, the passing of a speculum, which is a part of the treatment I am going to call your attention to. I stated in the outset that this disease occurred in children. I had my attention called not long since by a mother to the fact that one of her babies, three months old, had fits of crying, indeed almost went into spasms when its bowels moved. The bowels had been constipated. I ordered them moved freely, but no relief. On inspection I found a small fissure. I anointed my finger, passed it gently up the bowel, and a cure was the result.

In adults place your patient in Simms' position. If there is much distress, anoint your bivalve speculum and gently pass it into the opening; with the set screw open the blades slowly; it will give him no more pain than he suffers at each defecation, and you can assure him so, and this time when you release it the pain is over. You will have to govern the amount of dilatation according to your patient; some will stand more than others. Then after cleansing the offending part, pass over it several times a stick of nitrate of silver and let your patient go, with directions to keep clean, take a laxative, and keep the bowels open and apply an ointment of salicyl. acid. gr. x, vaseline 1 oz., twice daily, and report to you in five days. You may find him well, but if not, repeat your treatment in the same manner a few times, leaving off the dilatation when discomfort has ceased.

If you want to do all the work yourself, have him report at your office each day and make him pay you accordingly, in which event instead of using the ointment swab off the place with pure ichthyol.

The ulcer or higher lesions are treated in the same manner, though they may require a little curetting before making the applications. The after-treatment is the same as before, except instead of using the ointment or ichthyol have the patient wash out the bowel on going to bed, and insert a hollow suppository containing 3 gr. of iodoform and filled with any astringent or any thing else the case may require. In all the above work you can relieve much of the pain by the use of cocain, either in solution or crystal form.

BOWLING GREEN, KY.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, December 7, 1900, Ap Morgan Vance, M. D., President pro tem.,
in the Chair.

Gall-Stone Colic. Dr. B. C. Frazier: Ten months ago I saw a gentleman, aged sixty-five years, in what I took to be a mild attack of gall-stone colic. He was relieved by one hypodermic injection of morphine, after which I kept him on calomel, followed by phosphate of soda, for several weeks. This man gave the history that for ten years, two or three times during the year, he had similar attacks. He had been in the country most of the time, and this was the first attack in which I had seen him. He had a temperature of 99.5° F. when first seen, and after the attack he had marked jaundice, sufficient to be perceptible by the family.

I advised him to continue the phosphate of soda for some time, and did not see him again until ten days ago, when I was called early one evening; found the patient suffering a great deal, most of the pain being referred directly to the epigastrium, seldom radiating from that region. He was suffering quite intensely, and had taken, before I reached the house, a capsule containing one-third grain of codeine combined with something else, the nature of which I know not. This gave no relief, and I was sent for. I gave him one-fourth grain of morphine at once, and in three quarters of an hour, as suffering had not abated, the injection was repeated. In another hour the third dose was given, which was followed by some relief. He did not sleep that night, but rested more or less.

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

During the following day he was very sleepy and slept a great deal, probably from the effect of the morphine, pain having subsided. After this attack he had quite an intense jaundice; he perspired freely for two or three days without any cause as far as I could see; he was mildly delirious; even for a week he would see all sorts of things, and frequently would call his daughter to come to him; that he felt uneasy, although he knew he was awake. He had no appetite. With brisk purging and eliminative treatment he has been entirely relieved. I have been watching the stools for gall-stones since this last attack, but none has passed, or if it has it has escaped detection. His stools were clayey the first two or three days, there being no evidence of bile.

The question comes up with me whether this man has been passing some biliary stones or whether it is simply a catarrhal condition occluding the biliary ducts for the time being. He is a man of good habits, although in the last few months he has been taking more whisky than has been his custom heretofore; he states perhaps a quart a week.

Discussion. Dr. J. A. Ouchterlony: The fact that pain was so very intense as to require repeated administration of morphine in such quantity, and that there was jaundice, would, to my mind, be very conclusive as to the diagnosis. I believe it must have been gall-stones, and I have seen a good many cases exactly like that where examination of the feces would be made after the attack of gall-stone colic was over and no stone would be found, and it would happen over and over again, one attack after another; then finally our efforts to find gall-stone would be successful. I believe that in these cases the reason we do not find gall-stone is that we do not carry on the examination for a sufficiently long time; the gall-stone becomes lodged somewhere in the course of the intestinal tract, and because of these frequent disappointments I make it a rule to continue to examine the stools for several days after the attack of gall-stone colic is over. I had a case about two years ago of that kind, and it was not until several days after the gall-stone colic was over that we succeeded in finding two gall-stones.

I have given phosphate of soda, of course, like all the rest, but I must confess to my preference for muriate of ammonia. I give it in large doses, twenty grains three times a day, and continue it for weeks and weeks, and I have found that many cases would yield to that treat-

ment where phosphate of soda had been given for a long time without preventing a return of the attacks.

Dr. William Bailey: A remark or two in connection with what Dr. Ouchterlony has said: I would like to mention that it is possible, in these cases of gall-stone colic, that there may be the engagement of the stone in the cystic duct giving a great deal of trouble, and yet in some way the gall-stone is carried back into the gall-bladder instead of being passed into the common duct. I have no doubt that repeated attacks of gall-stone colic in this way may occur without the stone being discovered, because it never gets into the alimentary canal. I mention this simply as a condition which might exist where we may have frequent attacks without discovering a stone. Moreover, a stone, like any other foreign body, may be delayed in its transit, and it may be weeks before it would be shown. I would like to mention also that on several occasions I have had specimens thought to be gall-stones brought to me where very large doses of sweet oil had been given. These specimens simulated in appearance very much gall-stones, but by simply applying the heat test the stones were all gone. I have seen two or three cases of this kind where, after oil in large doses had been given, and passing from the bowel in this form, patients have brought the specimens to me hoping that they had found gall-stones.

As to treatment by phosphate of soda, my judgment is that it is particularly favorable to jaundice that occurs without gall-stones, due simply to a catarrhal condition extending from the duodenum into the common duct. The impression upon the mucous membrane that is made by phosphate of soda given in this way is that the duct is opened more promptly than if left to itself. I doubt if it has very much influence in the prevention, certainly none in the dissolution or solution of gall-stones, but only in controlling the catarrhal condition of the ducts found in many of these cases. I think muriate of ammonia would act along the same line, as we use it in catarrhal conditions of all the mucous membranes.

Dr. H. H. Grant: It is not very unreasonable to suppose that a stone may escape from the gall-bladder and become engaged in the common duct and obstruct it so as to produce jaundice of variable severity, and yet not escape through the duct into the intestine; and I think Dr. Bailey's suggestion is merely a recital of the experience a number of us have had. These stones not infrequently engage in the common duct just at the junction of the three ducts, and remain there for a few hours,

and then finally drop back into the gall-bladder, and in this manner causing the second or even the third attack. I think, too, there is no question but these stones are often delayed a long time in the common duct. I have had only recently a patient who had been for two months in bed with a severe attack of gall-stone colic succeeded by jaundice, which never completely but partially disappeared, getting a little worse now and then, evidently due to inflammation of the duct, because the jaundice would partially disappear. The patient was prepared for operation two months after the original attack, and on the morning of the operation, in response to purgatives which were given to prepare her, she passed two large stones, which evidently had been either in the mouth of the duct or high up in the duodenum for a considerable time, presumably partly in the duct, if not completely in it, although the stools had been partially colored by bile all the time. There is no reason to disregard the diagnosis of stones in the gall-bladder, or even in the common duct, because stones can not be discovered in the stools. The stone may have retreated into the gall-bladder or it may have become so hidden away in the outer portion of the common duct as not to completely obstruct it, and at the same time to remain there in defiance of the ordinary methods of purgation.

Dr. J. G. Cecil: Just a word or two in regard to the treatment: I would like to ask the experience of those here whether they have observed any especial effect of the Dawson Springs water on gall-stones already formed, or in the formation of them? I have seen a few people who suffered from gall-stones who claimed to have been very much benefited by a prolonged stay at these springs. I can not recall the analysis of the water just now, but it is similar to that of Crab Orchard and French Lick. I remember one lady in particular, who was seen by Drs. Vance, Ouchterlony, and perhaps some of the others present, who afterward died unrelieved of gall-stones. She told me on several occasions that she had been very much benefited by a prolonged stay at Dawson Springs. She also expressed herself as having received great relief from large doses of sweet oil.

Dr. J. A. Ouchterlony: I would like to call attention of the Society to two points in the diagnosis. We all know how frequent it is to have vomiting during an attack of colic, especially in the earlier periods. My rule has been when there is vomiting of bile to conclude that the gall-stone has not yet reached the common choledochus duct, especially if at the same time there is no jaundice. So long as the stone remains in

the cystic duct, of course there is no obstruction to the entrance of bile into the intestinal canal, and it is only when this has happened that jaundice develops; and while the common choledochus duct is obstructed, we find that there is no bile in the vomited matter. The fact that in this case there was not only violent pain, but well-marked jaundice, I think establishes the diagnosis.

Dr. B. C. Frazier: This gentleman had no nausea or vomiting the first evening that I saw him, but the next day he vomited a great deal, which I took to be due to the morphine which had been administered. I have not seen the patient for several days, but the jaundice had practically cleared up at the time of my last visit, and he had no further pain.

Scarlet Fever: Diphtheria. Dr. J. M. Ray: I have recently seen two cases of considerable interest. The history is about as follows: Two gentlemen married sisters and lived next door to each other. There was a case of scarlet fever in the family of one which ran a typical course, with considerable throat complications, typical scarlatinal eruption, etc. The child eventually recovered. The brother-in-law next door had a child taken sick a few days later with a very sore throat, but without any eruption. It went along for several days, when one morning very early I was called to see the case in consultation to stop a profuse nosebleed. When I reached the house the nose had been plugged and the hemorrhage stopped, so I thought it better to let well enough alone, and did not disturb the nasal plugs. The child was young and difficult to examine, but I could see nothing in the throat. There was not present the typical scarlatinal eruption. The next day the child passed into collapse and died.

The day before I saw the child, that is, three days before death took place, the mother was taken sick with sore throat and very high fever. This went along, and I was called to see her the day after the child died, and in examining the throat I found hanging down out of the naso-pharynx a large mass of diphtheritic membrane, and after questioning the family and attendants I learned that the child that died had spit up quite a quantity of membrane. The mother evidently had been sick for four or five days before I made this examination. She had slight gland involvement of the neck, and there was no evidence of systemic infection beyond a very bad heart.

The question I desired particularly to hear discussed was, this being

a case of diphtheria which had existed for five or six days, the heart in bad condition, whether it was wise to use antitoxin. I have been a firm believer in antitoxin, especially in children, where it can be used sufficiently early; but in this case, the disease having existed for five or six days, the heart being weak and irritable, I advised against the use of antitoxin.

The membrane was beginning to separate when first discovered, all the deposit being in the naso-pharynx. It would seem as if the child that died had a mixed infection—scarlet fever and diphtheria.

Discussion. Dr. S. G. Dabney: I believe I would have used antitoxin in this case. I do not see any reason to suppose that antitoxin has an injurious influence upon the heart. We certainly frequently use it in children in extremis, and they recover. It has been used in a vast number of persons in health for prophylaxis without any bad effect. The argument might be made that the conditions are different using it in health and in the condition described by Dr. Ray. I do not believe, however, that antitoxin would have added any thing to the gravity of the case. It is probable that the patient will recover without it, but in every case, if I was sure of my diagnosis of diphtheria, I would use antitoxin.

Dr. William Cheatham: I would have used antitoxin in this case, with strychnine for its effect upon the heart. We know that one attack of diphtheria does not prevent another immediate invasion; and antitoxin in this case might have prevented further trouble.

Dr. William Bailey: I simply want to ask one question, and that is in reference to the supposed mixed infection in the case of the child that died. The only reason I can see for presuming that there was a mixed infection was the fact that there was a case of scarlet fever next door. So far as the case is concerned as reported by Dr. Ray, there is no proof that there was any scarlatinal infection in the child that died, or in its mother. Diphtheria is quite sufficient to account for every thing given, and we are not warranted in even this association; the close relation of scarlet fever and diphtheria, and the relation of the two families, even that would not be sufficient to warrant it without the eruption or without some other manifestation of the disease. Scarlatina without eruption is very rare, as rare as the eruption of measles without the catarrh, unless it is one of those cases in which toxemia and death come before the time for the eruption. Scarlatina is one of the diseases that is very likely to "get there" in the way of an eruption if the

patient lives a sufficient length of time. These two patients lived long enough to have the eruption, because we get it on the second day. As no eruption came, I would be inclined to attribute the manifestations to diphtheria alone.

As to the use of antitoxin, I do not believe that it has any marked depressing effect upon the heart, and it may relieve the heart that is depressed under the toxine of diphtheria by combating that toxine. I would rather give it than not if the heart were depressed; at the same time I would support the heart by the administration of strychnine, as indicated by Dr. Cheatham.

Dr. J. M. Ray: In the case that died I understand diphtheria was not suspected, and, as there were all the evidences of scarlet fever, barring the eruption, and further, owing to the age of the child an examination of the throat could not well be made. I saw the mother on the fifth day of her illness; that is, five days after she had commenced to have fever, and, examining the throat, I found membrane loosening in the naso-pharynx. Her heart was in such condition that I was afraid the shock of the injection of antitoxin would be too great. She received a number of hypodermic injections of strychnine, and was given whisky in milk. The membrane in the throat has about disappeared, but the condition of the heart remains the same. I do not believe antitoxin has any direct influence upon the heart, but under the circumstances I was afraid to give it.

The essay of the evening, "*Sequelæ of Scarlatina: Prevention and Treatment*," was read by John G. Cecil, B. S., M. D. [See page 41.]

Discussion. Dr. J. A. Ouchterlony: Dr. Cecil's paper seems to me to be exceedingly practical and timely, and gives a very good review of the different sequelæ of scarlet fever and the treatment therefor. I have no fault to find with any thing said in the paper; it covers the ground very well, and the therapeutic measures suggested are exceedingly wise and judicious. But I rise to call attention to some sequelæ that I have met with, and which perhaps claim attention in this connection. One of them is pleurisy, which I have happened to meet in a number of cases, and, unfortunately, the pleurisy that follows scarlet fever is generally suppurative. I remember a case which occurred in the person of a little boy, six years of age, where suppurative pleurisy developed as a sequel to scarlatina, and it was necessary to open the

chest and perform the operation that we now resort to so frequently and with such good results.

As to the heart sequelæ, I am glad that Dr. Cecil called especial attention to these, because I am satisfied that this is a part of the subject of scarlet fever that is often overlooked at the bedside. Endo- and peri-carditis now and then occur, and heart complications certainly occur frequently as evidenced by the number of cases of chronic valvular disease that I have met with in adults where there was no other previous history than an attack of scarlet fever from which the patient suffered during childhood, and I have become so convinced of the frequency with which the eruptive fevers give rise to endocardial inflammation that in a person with chronic valvular disease, where there is no evidence of either rheumatism or renal disease having existed, I always begin to investigate as to the occurrence of scarlet fever and of measles. Scarlet fever gives rise to endocarditis more frequently than measles, though I have met with cases as the result of that eruptive disease also. One fact in connection with the renal trouble connected with scarlet fever is very hopeful, viz., that the anatomical changes in the kidney in connection with scarlet fever are as a rule not destructive. George Johnston, son-in-law of Sir Thomas Watson, first called attention to this form of nephritis. It is claimed that the involvement is in the urinary tubules, that it is especially the epithelial lining that gives rise to the trouble; epithelia are shed in large quantities, blocking up the tubes, forming a mechanical obstruction to the exit of urine, even though it may be secreted. Bennett, of Edinborough, used to say in this trouble we had an inflammatory disease of the kidney which not only permitted the use of diuretics, but actually indicated them, and his rule was to prescribe bitartrate of potassium as likely to flush the sewers, so to speak, and wash out the epithelial masses that accumulated there.

Recently my readings made me acquainted with a form of nervous trouble in connection with scarlet fever that I am happy to say I have never met with myself, that is, paralysis. I forget now the observer, but quite a number of cases of paralysis are reported as having occurred in connection with scarlet fever. It seemed that in most of the cases paralysis occurred early, and I should think it must have been in the form of a neuritis. More rarely paralysis in different parts of the body occurred late. It has always been disappointing to us that while we feel satisfied that scarlet fever and measles are infectious diseases, we

have not been able to discover the particular form of micro-organism that gives rise to these morbid conditions. I am glad to say that lately quite a number of investigations have been reported where it was found that scarlet fever is essentially a streptococcic infection, and that it is a peculiar form of streptococcus that is the etiological factor in the disease—the streptococcus conglomeratus. In every case that was subjected to bacteriologic investigation it was found that this form of streptococcus was present, and it was never present in any other cases than those of scarlet fever.

Dr. S. G. Dabney: The essayist has covered the ground pretty well, both from the standpoint of the general practitioner and the specialist. While the paper was being read I was reminded of two young men I saw last spring. Both of them had been students at Washington and Lee University, Virginia. Both had had scarlet fever there. One came home with a complication of the ear. The other came home with puffy eyelids, but said the eyes did not hurt him much. I told him the puffy eyelids most likely indicated some disturbance of the circulation, and he had better have his heart and kidneys examined. He stated that a doctor in Lexington, Va., a very competent man, had examined his urine very carefully, but was not sure that he examined his heart. His heart was examined by a gentleman in Louisville, and valvular disease was found.

To go back to the complications of the eye, ear, nose, and throat, to which the essayist alluded: In regard to the eye, the most common complications we see are those external inflammations of the eye, particularly of the conjunctiva, which last for a while afterward; and quite often following scarlet fever and probably due to the depressed general health from that cause, we have phlyctenular ophthalmia. I have never seen any of the intra-ocular diseases resulting from scarlet fever, except one case of mild neuro-retinitis, which Drs. Cheatham and Ray also saw—it being the patient of Dr. Cheatham.

Throat complications are much more marked at the time than as sequelæ. We have a condition which Dr. Cecil failed to mention, viz., we frequently see enlargement of the tonsillar tissue in the throat, both the pharyngeal and faucial tonsils, and this hypertrophy continues.

Dr. Cecil was wise in dwelling upon the importance of early puncture of the drum membrane in scarlet fever; it is especially important in this disease where there is pus in the cavity; and if there is a presumption of pus, it is safer to be on the side of early puncture.

We all see cases of otitis media following scarlet fever quite frequently, and only too often we see its most serious complications, both in disease of the mastoid and auditory nerve. This is more apt to follow where there has been a mixed infection with diphtheria than in genuine scarlet fever pure and simple. The lesions are usually more severe in mixed infection. However, we frequently see bone disease following scarlet fever, and I have seen two or three cases of a disease that seems to be going out of fashion now, of which the books say but little, and many eminent otologists say nothing about—inflammation of the mastoid periosteum, pus under the periosteal membrane over the mastoid process, not involving the cells.

The treatment of eye, ear, and throat complications has been sufficiently well outlined in the paper for our purpose to-night. Much depends upon restoration of perfect general health. Many cases require operative treatment. Very often adenoids and enlarged tonsils have to be removed after an attack of scarlet fever that were not observed before.

Dr. F. C. Simpson: An interesting point was brought out by Dr. Ouchterlony, that is, pleurisy following scarlet fever. I recently had under my care a boy, seven years of age, with an attack of pleurisy, in which I used antiphlogistine over the entire side. He went through the attack in about ten days without having any suppuration. I do not know that there is any advantage in the use of antiphlogistine except as a poultice.

Concerning what Dr. Cecil said about opening and draining joints: I believe the better way would be to aspirate and not to open the joint. When you open a joint there is apt to be a great deal of trouble.

Dr. William Bailey: There is a question in my mind whether some of the conditions mentioned by the essayist should be regarded as consequences, such as infection of the middle ear, etc., certainly not so much so as the sequelæ that follow later on, such as are more apt to occur in the kidney and elsewhere. It occurs to me that involvement of the middle ear is an extension of the local condition or inflammatory process. It does not come, I take it, from the absorption of toxines, but simply an extension by virtue of continuity from the throat and nose into the Eustachian tube and on into the middle ear, and really is more a part of the primary process of the disease, and hence I do not think it is entitled to consideration as a sequel of the disease, like involvement of the kidney that comes later on from toxines or from exposure of the

skin, which is very delicate after desquamation; after the skin has peeled off it is sensitive, and the child in a mild case not being sufficiently well guarded is exposed perhaps unduly, and thereby acute Bright's disease is excited, or it may be that toxine that is circulated in the blood going into the kidney excites inflammation of the mucous membrane lining the tubules.

As to the management, particularly of this sequel: I am inclined to think that we have in the remedy already mentioned—bitartrate of potassium, either alone or in combination with digitalis, constitutes a very satisfactory treatment of this complication. An infusion of digitalis-bitartrate of potassium should be given frequently. In all cases of scarlet fever we ought to have the patient drink more freely of water; make it a point to see that they have the benefit of flushing the kidneys at all times for a month. The time mentioned by Dr. Cecil should be extended to three months. Very rarely have I seen complications of this kind occur after four weeks; after that I believe the child is practically safe from renal complications.

Inflammatory processes of the pericardium, endocardium, and pleura are proper sequelæ, probably resulting from the circulation of toxins of the disease, and all of these complications, I think, are less likely to occur if proper management has been had of the throat and nose during the time of the primary disease.

Dr. William Cheatham: In the throat not often do we have so much loss of substance and ulceration as we have swelling of the tonsillar tissue and exudation.

Dr. Cecil spoke of cleansing the nose with peroxide of hydrogen. I think some mild wash like Dobell's solution is better than peroxide; the latter is objectionable for several reasons. Peroxide used too frequently is likely to lead to ear trouble by forcing the secretions up into the middle ear; likely to produce involvement of the sinuses, antrum, etc. Again, its use is painful. I would not use peroxide in the naso-pharynx or in the nose; it might be used about the tonsils. The coming treatment of scarlet fever is serum-therapy.

Dr. B. C. Frazier: I rise to mention one point, to ascertain whether any of the gentlemen have used in the treatment of adenitis of scarlet fever the ointment of ichthyol; after making the application of hot poultices, gentle massage, and the application of ichthyol ointment before suppuration has taken place. This has seemed to do some good in causing subsidence of the inflammatory process in the early stages.

Dr. A. M. Vance : I have been called many times to treat the so-called adenitis following scarlet fever, and my experience is that it is usually a peri-adenitis ; in acute cases there is pus around the gland, and the gland is not destroyed as it is in true adenitis. In chronic adenitis of tuberculosis and syphilis, where the gland proper suppurates, we never have healing until the gland is destroyed, but in peri-adenitis that follows an acute infectious disease we do not have the gland destroyed as a rule, and we get healing quickly after evacuation of the pus. It is the deeper glands that are usually involved following scarlet fever and diphtheria. We find pus deep down in the neck. I have never seen a case of arthritis following scarlet fever.

Dr. John G. Cecil: In response to the question asked by Dr. Frazier in regard to ichthyol ointment: I have had no experience with it, and consequently can not answer his question.

With reference to Dr. Cheatham's criticism, which, I think, is well timed, I think he misunderstood me. I suggested Dobell's solution or something similar to that as a cleansing agent for the nose, but Loeffler's solution or the application of peroxide of hydrogen diluted one half with cinnamon water, and the use of bichloride of mercury only in the throat. This may be used either as a gargle or with a mop. I would not use peroxide in the nose.

I think Dr. Bailey's observation is correct, and accept what he says in regard to ear complications being complications rather than sequelæ of the disease. The point that I would insist upon, however, is that I believe with proper attention from the specialist, and perhaps only such attention as a specialist can give, to the throat, whether it be diphtheritic, ulcerative or exudative in character, many complications of the ear might be prevented, as I think this is the source of infection which results in so many of these special troubles about the head—all the special senses.

I am glad that Dr. Ouchterlony developed the complications and sequelæ further than I did in the paper, that is, in regard to heart troubles. Like him, I have come to associate a great many cases of chronic valvular disease of the heart with an antedating scarlet fever. In many cases we will not find any history of rheumatism or any other primary disease which would develop a chronic valvular disease of the heart unless we go back to childhood. And it is quite within the range of facts to believe that scarlet fever is responsible for many cases of pericarditis, endocarditis, and pleuritis.

B. A. ALLAN, M. D., *Secretary.*

**NEW YORK ACADEMY OF MEDICINE—SECTION ON
ORTHOPEDIC SURGERY.**

Meeting of November 16, 1900.

Fracture of the Femur at Birth. Dr. T. H. Myers presented a baby, one month old under treatment for fracture of the femur just below the trochanter minor. The child was the second of twins, and presented by the breech. The forceps failing, a hook had been used and caused a fracture, with the very unusual displacement of the lower end of the upper fragment backward in spite of the tendency of the psoas and iliacus to pull it forward. The next day the child was in great distress. There was extensive ecchymosis at the seat of the fracture, three-eighths inch shortening, edema of the limb and eversion of the foot, and, on any slight motion, the muscles attached to the anterior superior spine were thrown into a marked spasm, which drew the lower fragment forward. A plaster of Paris jacket was applied, in which was incorporated a steel bar $\frac{3}{4} \times \frac{1}{8}$ inch, extending from the angle of the scapula to the toes and bent at a right angle at the buttocks and the heel. Traction was made and eversion overcome by adhesive plaster applied to the limb and fastened to the steel foot-piece. The plaster of Paris enclosing the pelvis provided secure counter-traction. A light plaster of Paris bandage secured the limb to the splint and held back the upper end of the lower fragment. A fenestrum permitted the dressing of the cord. The child fell asleep at once on this application, which made after-attendance easy and promoted the comfort and general health of the patient. No displacement; shortening one-eighth inch.

Dr. V. P. Gibney said that fixation had been secured in an admirable manner. He asked why the limb had been flexed.

Dr. Myers said that he had in that way sought to relax the psoas and iliacus muscles in order to reduce the unusual displacement. He had also seen a directly lateral displacement in a case of fracture of the neck of the femur, probably caused by traction with the hook.

Dr. S. A. Twinch related the case of a child whose right femur had been broken at the junction of the middle and upper thirds in a difficult labor. The next day the limb was edematous and almost black. He had put the limb up in a plaster of Paris spica, with the thigh flexed nearly at a right angle and the leg somewhat flexed. Eighteen

days later the dressing was removed, and the bone was found united in good position, but with considerable callus. He recalled a recently reported case of the same kind in which a good result followed retention in place for three weeks of a starch spica bandage. The patient had been examined when twenty years old, and it had been impossible to tell which leg had been broken.

Dr. G. R. Elliott said that the mechanical problem was how to secure apposition and fixation, a problem well solved by the use of a steel band and plaster of Paris, but capable of solution by easier methods, as by the use of adhesive plaster.

Dr. A. B. Judson said that fractures in infancy usually united with great readiness and but little ultimate deformity.

Dr. H. L. Taylor said that when the femur was broken in so young a child deformity was not an uncommon result, which he thought could not follow the method exhibited.

Dr. M. G. Campbell, of Atlanta, Ga., commended the skill and carefulness with which the baby had been treated, which were in marked contrast with the too prevalent idea that nothing of importance could be done for one so young. Before pain had been relieved and muscular spasm overcome rest had been impossible and feeding difficult, two things on which the welfare of a baby absolutely depended.

Dr. Myers said that a common method of placing the child in bed on its back and suspending the legs vertically made nursing difficult, and did not control the position and secure immobilization so well as had been done in his patient, who lived at home, and was conveniently carried to the hospital for attendance.

Incipient Hip Disease. Dr. Judson presented a girl seven years of age with symptoms of disease of the left hip of twelve weeks' duration. There had been lameness and pain in the knee, the latter so severe that the child had to be lifted very carefully. Rheumatism was excluded. Night cries had followed unusual exercise in the daytime. Pain and lameness had been inconstant, recurring after intervals in which the child was apparently entirely well. General condition excellent. A diagnosis of hip disease had been made, in consultation with the family physician, on the above history and the following signs, which were observed October 25, 1900: Fullness of the left groin and flattening of left natis, the left gluteal fold more shallow than the right, left thigh and leg one-half inch and one-quarter inch less in circumference than the right, and limitation of extreme motion in every direction, with

reflex muscular action. Limitation of motion was not found at the second examination, but reappeared at a later date. On presentation the child walked when the splint was off with no defect in her gait. When she was examined slight limitation of motion and reflex spasm were found by different observers on attempting extreme flexion, extension, abduction, rotation, and abduction with the thigh flexed at a right angle. An ischiatic crutch had been applied November 15th, to be worn in the daytime with a high sole on the well foot, directly to relieve the limb from the labor of locomotion and the affected bone from bearing the weight of the body, and ultimately to permit resolution of the inflammation by natural processes. Prognosis: Absorption or incarceration of the focus in the cancellous tissue and recovery, after one year or two years, without deformity or any trace of disability.

Dr. Taylor and Dr. Myers recognized the presence of some of the signs of hip disease, and thought that a positive diagnosis required further observation.

Dr. Gibney said that after the reported and present examinations he would give the patient the benefit of the doubt and consider the case as an incipient one, and if changes occurred requiring more drastic measures he would seek very seriously to overcome the reflex spasm by immobilizing or putting the parts at rest. If the perineal crutch could be relied on to give the hip rest enough so that resolution would take place, however small the focus or wherever located; the treatment was perfectly justifiable. He appreciated the importance of protection from weight and concussion, but thought that an apparatus which allowed pressure of the toe on the ground did not give enough protection to the joints, so far as reflex muscular spasm was concerned. He questioned whether it did not add to the reflex spasm to have the patient stepping on the toe and ball of the foot.

Dr. Judson said that the ischiatic crutch, as commonly worn, allowed the anterior part of the foot to reach the ground. The toe could be entirely removed from the ground by using a longer crutch and a higher sole, but this would lessen the ability of the patient to walk. He thought there was an important difference between concussion transmitted from the heel through a straight bony column to the affected joint, and the same modified in transmission by the interposition and action of the ankle-joint controlled by the muscles of the calf.

Dr. Gibney thought that protection of the joint was not so important as relief obtained by preventing reflex spasm.

Dr. Elliott questioned whether the form of apparatus worn by the patient was sufficient in a patient having a good deal of reflex spasm.

Dr. Taylor questioned whether in a case presenting well-marked symptoms it would not be better to apply a splint with adhesive plaster, to be worn day and night, than to use an ischiatic crutch to be removed at night.

Dr. Judson said he had lost faith, if he ever had any, in the effect of apparatus designed to elongate contracted muscles, or to arrest or prevent reflex action by a direct mechanical pull. Indirectly, these important objects were gained by arresting the functions of the diseased joint, thus permitting abatement and resolution of the inflammatory action, which was the incitement of reflex muscular action. The latter ceased as soon as arrest of function brought about resolution. The two chief functions of the hip-joint were motion and weight-bearing, and that the latter, carrying with it concussion, was more important as a factor in pathology and treatment than the former. The ischiatic crutch did not so thoroughly remove the weight of the body as putting the patient to bed, but the other advantages were obvious. It practically put the limb to bed and let the patient run about and go to school. In the painful periods of hip disease the traction splint, combining the protection of the crutch with traction by adhesive plaster, was indispensable for the relief of pain by fixation.

Convalescent White Swelling of the Knee. Dr. Judson presented a boy, seven years of age, slowly convalescing under mechanical treatment for white swelling of the left knee. A year ago the patient's general condition was most unfavorable, and locally there were sinuses surrounding the knee; great swelling and the usual evidences of a disintegrating joint. His condition and the method of his treatment were described when he was presented to the Section on October 20, 1899, and the opinion was expressed that it was a case in which operative surgery should be practiced in order to save life. Continued reliance, however, had been placed on the reparative natural processes, assisted by mechanical treatment. In spite of the most unfortunate and discouraging environment improvement had been marked, generally and locally. The tumor was very much reduced, and firm scars had taken the place of nearly all the sinuses. A year ago the child was emaciated and distressed, but, on examination, he was found to be well nourished and comfortable. Treatment would be continued by a fixative brace worn day and night, and an ischiatic crutch worn only in the daytime.

Prognosis was still in favor of a useful limb, of good length, with no flexion and no deformity, except a slight and unimportant degree of subluxation.

Dr. Elliott said that some of the swelling might be gotten rid of by systematic compression and drainage, and removal of the tight band above the knee.

Dr. Judson said that the tumor of white swelling of the knee disappeared with the other signs and symptoms, which yielded in due time to natural repair and restoration, assisted by treatment. What appeared to be a tight band was that part of the fixative apparatus which made pressure from before backward near the joint in opposition to the counter-pressure made by the ends of the brace from behind forward at the extreme upper part of the thigh and lower part of the leg. There was no constriction or interference with circulation or nutrition at any point, as no part of the brace was allowed to touch the posterior surface of the limb near the joint. The apparatus was a simple lever, and any other arrangement of it would destroy the leverage, which was relied on to arrest motion and reduce the flexion.

Dr. Taylor said that this result reminded him, by contrast, of the many patients whom he had seen with limbs disastrously shortened and deformed as the result of excision, an operation which interfered with the growing epiphyses, leading frequently to a shortening of six to eight inches. He recalled an instance of this operation in which the result was complete dislocation of the tibia backward and a flail joint.

Dr. Gibney said that the best surgical practice omitted excision of the knee in children. He saw too many patients coming for the correction of deformity and almost hopeless disability, the results of excision. To save life amputation was required, in certain cases, but never excision in a child. He advocated a country branch to a hospital, open the year round, where children could be on a farm and have simply nurses and a physician or two to look out for them, and do very few operations.

Dr. Judson said that the admirable plan thus outlined was too purely expectant. He would add thorough and painstaking mechanical treatment, which, no less than good food and wholesome surroundings, reinforce the processes of recovery in growing children.

Dr. Myers said that general surgeons should agree with orthopedic practitioners in interdicting excision of the knee in children. He had kept a boy under strict observation for six years after his knee had

recovered to prevent excision for deformity, until he attained his growth. He returned from a vacation, however, to find that the patient had been sent to a general hospital, where excision had been done at once, with recurrence of extreme flexion with lateral deviation and the certainty of more shortening with further growth.

Cases of Funnel-Chest. Dr. Taylor reported the case of a girl six years of age, seen in September, 1900, with a remarkable congenital depression at the lower end of the sternum, an instance of typical funnel-chest of moderate degree. There were no evidences of rickets, and the child's health was good. She was the fifth child in a family of seven. Her mother had the same deformity, but knew of no other cases in the family. This condition was usually attended with some displacement of the heart, but without impairment of circulation or respiration. Persons thus deformed had made fair athletes and soldiers.

Fatal Case of Abscess in Cervico-Dorsal Pott's Disease. Dr. Gibney exhibited a specimen from a patient affected with Pott's disease, with deformity. A girl five years of age had been treated as an out-patient by a head support for two and a half years. The appearance of an abscess over the spinous processes of the last cervical and first and second dorsal vertebræ made it difficult to adjust the support properly, and the child became an in-patient. Aspiration gave only partial reduction of the tumor, and a sinus was established by incision, after which the child was going about the ward with the head support comfortably readjusted. In the afternoon of November 8, 1900, cyanosis appeared; was relieved when the patient was put in bed, but recurred during the night, when death seemed imminent. On November 9th a tumor was found in the outer portion of the left cervical triangle with deep fluctuation. Pressure did not increase the flow from the sinus but added to dyspnea; traction by the weight and pulley failed to give relief. Attempts at exploration of the pharynx increased cyanosis. Under ether (three drams) an incision two inches in length along the sterno-cleido-mastoid exposed the carotid, and a needle procured cheesy pus. With the finger between the carotid and esophagus a second sac was ruptured, with the evacuation of four ounces of pus and some bone detritus. A drainage-tube was inserted; respiration became easier. Temperature 104.4 degrees in the afternoon. November 10th and 11th the patient slept fairly well at night, but with a good deal of coughing, and had recurrences of difficult breathing and cyanosis in the daytime.

The temperature fell to 100 degrees. After sleeping the early part of the night the patient died suddenly on November 12th, at 3.30 A. M. Autopsy in the afternoon showed recent pleuritic adhesions, with normal lungs and abdominal viscera. The two abscesses did not communicate with each other directly; cavities in the vertebral bodies communicated with the sac of the second abscess, which extended along the anterior and lateral aspects of the vertebræ and downward behind the pleura and almost surrounded the esophagus. The pleural cavity was not invaded. There had been no paralysis; the cord was found to be pretty good in consistency all the way up. He had seen no less than six children die unexpectedly in the night with abscesses arising in this location from carious vertebræ. Autopsies had not made clear the cause of death.

Dr. Myers referred to the case (related at the meeting of March 18, 1898. See the *American Practitioner and News*, October 15, 1898, Vol. XXVI, page 256) of a boy seven years of age affected with vertebral disease in this location, and an abscess discharging in the posterior triangle, whose temperature, on repeated trials, rose when the boy was up and fell when his lying down facilitated the drainage of the abscess.

Reviews and Bibliography.

Lessons on the Anatomy, Physiology, and Hygiene of Infancy and Childhood.

Consisting of extracts from lectures given at Rush Medical College. By ALFRED C. COTTON, A. M., M. D., Professor of Diseases of Children; Accoucheur and Physician for Diseases of Children, Presbyterian Hospital; Staff Member of the Central Free Dispensary and the Cook County Hospital; President of the Chicago Pediatric Society; Member of the American Pediatric Society, etc. 100 illustrations; cloth, \$1.50 net, postpaid. Chicago Medical Book Co., Chicago, Ill.

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We highly recommend this work as one of the very best yet published.

Progressive Medicine. Volume IV, 1900. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 428 pages, 69 illustrations. Per annum, in four cloth-bound volumes, \$10.00. Philadelphia and New York: Lea Brothers & Co.

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the article on animal heat is fully abreast with the times. The volume as a whole is splendid, both in arrangement and get-up, and bespeaks what we may anticipate Volume II to be.

Pathology and Morbid Anatomy. By T. HENRY GREEN, M. D., F. R. C. P., Physician and Special Lecturer on Clinical Medicine at Charing Cross Hospital, etc. New (9th) American from ninth English edition. Revised and enlarged. By H. MONTAGUE MURRAY, M. D., F. R. C. P., Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital. Revised for America by WALTON MARTIN, Ph. B., M. D., of the College of Physicians and Surgeons, New York City. Handsome octavo volume of 578 pages, with 4 colored plates and 339 engravings. Cloth, \$3.25, net. Philadelphia and New York: Lea Brothers & Co.

When the first edition of Green's Pathology appeared, it at once became the favorite text-book for medical students, and since that time it has easily maintained that position both in England and America. The frequent revisions that have been called for have enabled the author and editors to keep the book fully abreast of the times, and this ninth edition will be found more than ever to meet all the wants of the student of medicine.

The chapter on diseases of the blood describing the different blood-tests, and clearly demonstrating the different pathological changes that take place in the blood in the different diseases that the human body is heir to, is in itself enough to compensate the student for time and money spent, and when we look at the index and see the field of pathological conditions covered, we can safely say that the work is all that the author claims for it.

Essentials of Diagnosis. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By SOLOMON SALIS COHEN, M. D., Professor of Chemical Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine in the Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumptives, etc., and AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Polyclinic; Physician to the Philadelphia Hospital. Illustrated. Second edition, revised and enlarged. Price, \$1.00. Philadelphia: W. B. Saunders & Co.

This, like the other question compends of the Saunders series, is a valuable little book for hasty reference. It gives the leading symptoms of disease. It gives the differential diagnosis where the disease under consideration may be confounded with another of similar nature. It is well worth the dollar that it takes to purchase it.

The Gross and Minute Anatomy of the Central Nervous System. By HERMON C. GARDINER, A. M., M. D., Professor of Physiology and of the Anatomy of the Central Nervous System in the Albany Medical College; Member of the American Neurological Association, etc. With forty-eight full-page plates and two hundred and thirteen other illustrations, many of which are printed in colors, a large number being from original sources. Philadelphia: P. Blakiston's Son & Co. 1899.

We have not only read this work, but have given considerable study to its contents. As a result, we will say that the above caption is true. In our

opinion we deem it proper to say that it is the best work on the subject that has appeared in our own or any other language. The text is plain, but has at the same time a natural eloquence of diction that makes it fascinating and interesting. In a word, the text and illustrations dovetail into each other so well that the most fastidious could devise none better.

First, the histological make-up of the subject is mirrored in splendid form, and then an exhaustive consideration is given to the various parts and their relation with each other. In this the day of brain surgery and the morning of spinal and encephalic analgesia, it behooves us to be "up and doing;" know that brain and cord and many collateral, anatomical, and physiological truths will brighten the tablets that form your storehouse of knowledge. We are free to say we will direct our advanced students in anatomy to procure this work, and, in doing this, we believe we shall be advising in the right direction.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King College Hospital, and the Children's Hospital, Paddington Green, etc., and F. F. BURGHARD, M. D., and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc. In seven volumes. Volume IV, The Treatment of the Surgical Affections of the Joints (including excisions) and the Spine. Philadelphia and New York: Lea Brothers & Co. 1901.

This the fourth volume of an admirable treatise is the equal or an improvement upon the preceding volumes. It is practical and thorough in every way, and the illustrations are sufficient to aid the text. Spinal injuries of late have received much attention, and the authors have covered the field well as regards the most modern and conservative treatment.

This is pre-eminently the book for the busy surgeon of to-day, who has so little time for any thing but concise and detailed treatment. We predict a large sale for all the volumes of this treatise.

Students' Edition, a Practical Treatise of Materia Medica and Therapeutics. With Special Reference to the Clinical Application of Drugs. By JOHN V. SHOEMAKER, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc. Fifth edition. Thoroughly revised. 6¼ x 9½ inches. Pages vii-770. Extra cloth, \$4.00, net; sheep, \$4.75, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is the fifth edition of this most excellent work. It contains more than 750 pages, and is a perfect specimen of the bookmaker's art. Dr. Shoemaker is a graceful writer, and, in addition to the knowledge gained in perusing the book, there is a pleasure in reading his well-turned sentences. The author tells us in his preface that he has spared no pains to

make the book as nearly perfect as possible. This is evidenced in every page, and, we might say, in every line. The author, being an excellent clinician, is cognizant of the needs of the student and practitioner, and tells him in plain, simple words what he wants to know. There is no guessing; the facts are stated, and where there are a number of remedies to choose from the reader is told which is best or most reliable. Dr. Shoemaker's book has always been a deservedly popular one, and this last edition will be no exception to its predecessors. We predict a large sale for it.

RETROFLEXION OF THE UTERUS.—E. Schroeder (*Zeitschrift f. Geburtshulfe und Gynakol.*, B. 43, H. 3), in view of the frequency of this condition without symptoms, publishes the following instructive statistics: First, 90 nulliparæ with 23 retroversions and 7 retroflexions. Of these, the first group, 74, had no pains in the lower segment of the body, although 19 had retroversion and 5 retroflexion; 25 were virgins, of whom 8 had version and 2 flexion; the other 49 were married or had had intercourse, 11 showing the backward version and 3 flexion. The second group with symptoms, chiefly pain in the lower part of the trunk, comprised 16 patients, with 4 suffering from version and 2 from flexion; among them 3 were virgins with 1 retroflexion uteri, and 13 were not virgins, 4 presenting version and 1 flexion. Second, he investigated parous women previous to menopause with these statistics, in all 276 cases, 40 versions and 31 flexions. The group without symptoms was again the larger, 191 with 25 versions and 17 flexions. The series having trouble comprised 89 women, 15 with version, 14 with flexion. His last class included all women past menopause, 45 total, 13 versions, 4 flexions, namely, 38 with no pain, among these 9 versions and 4 flexions, and 7 with pain in 4 individuals with retroversio uteri.—*Medical News*.

METHYLENE BLUE IN MALARIA.—Rottger (*Deutsche Med. Woch.*, xxii., 237) reports favorably on the use of methylene blue in malaria. He gave it in doses of 0.1 gm. (1½ grains) six or eight times a day, and found that nine days was the longest period necessary for the disappearance of the subjective symptoms, but believes that the treatment should be continued until the spleen has returned to its normal size. He observed but one relapse. His patients experienced very few secondary effects. One case suffered from polyuria with strangury, which, however, was easily controlled by nutmeg. He met with little gastric disturbance, and believes that when it occurs it is due to an impure drug. Rottger disagrees with Gutman, who claims that the slow subsidence of the subjective symptoms of malaria was the essential difference between the action of quinine and methylene blue. The former argues that if we administer quinine in small doses repeatedly we obtain the same slow defervescence that he observed to follow the administration of methylene blue.—*Bulletin Cleveland Ger. Hospital*.

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H. A. COTTELL, M. D., M. F. COOMES, A. M., M. D., Editors.

ERNEST G. MARK, A. B., M. D., and JOHN R. WATHEN, A. B., M. D., Assistant Editors.

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This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The Editors are not responsible for the views of contributors.

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THE WINTER OF OUR DISCONTENT.

That this is the winter of our discontent can be truthfully said for many of us, and likewise for our patients, with the chilling blasts of winter and an occasional attack of la grippe. Each and every one of us would be glad to hie away to some land of sunshine and balmy breezes, where the winter's ravages may be escaped.

Where to go and how to go often perplexes many of us, and for that reason we name some places and how to reach them. The Southern Railway and its connecting lines, with the great Plant System of Railways in Florida and its connecting steamship lines, permeates the whole southern and western country; starting from Chicago, St. Louis, Cincinnati, Louisville, and Washington, D. C., daily and double daily trains that are unsurpassed by any in the United States will carry you directly to any of the following places, where pleasure, health, and protection from the biting winter winds will be secured:

New Orleans, Memphis, Thomasville, Savannah, and all of the important towns in Georgia, Charleston and Columbia, South Carolina, Asheville, Tryon, Pinehurst, and other North Carolina resorts, and all of the Florida towns, among the important of which are Jacksonville, St. Augustine, Tampa, Punta Gorda, Naples on the Gulf, and Palm Beach. The plant steamers will take you to Havana, Nassau, or any of the islands in the Gulf. It is only ninety miles from Florida to

Havana. The pleasure-seeker may go where he pleases in the South in the winter, and need take only one precaution, and that is to be sure that he secures pure drinking water—water that has no typhoid fever germ in it. Consumptives will be most comfortable in the high piney woods, at such places as Thomasville, Georgia, and many of the Florida towns that are located in the pine woods. The weather along the whole Gulf coast of Florida may be considered one of the most delightful winter resorts in the world; there is nothing that equals it when all things are considered. There is no rain in winter, and eternal sunshine and the most delightful balmy breezes that are to be found anywhere.

DR. GEORGE M. GOULD.

The summary manner in which the Board of Trustees of the Philadelphia Medical Journal discharged Dr. George M. Gould was wholly unwarranted and uncalled for, and, as a business proposition, was a bad move, and will cost the Philadelphia Medical Journal the loss of hundreds of subscribers. There is no more worthy gentleman and able editor in the United States than George M. Gould. He has done much for the profession in journalism and medicine in general. The profession will show their appreciation of his good work by sustaining him in his new venture to establish a medical journal.

KENTUCKY STATE MEDICAL SOCIETY.

The approaching meeting of the Kentucky State Medical Society ought to and will doubtless be one of the most interesting meetings that has been held for years. Every doctor in the State should make it a point to attend this meeting, and those that are not members should make up their minds to join the Society and take an active part in its working. It is an honor to be a member of such a Society, as it is one of the very best State Societies in the country.

THE two spring schools in Louisville, the Kentucky School of Medicine and the Hospital College of Medicine, have the largest classes that they have had in years, and are in every way deserving of this patronage and the confidence of the profession of the country, as they

are conducted on that high plane that tends to elevate the standard of medical education.

STANFORD, Ky., January 13, 1901.

Editors American Practitioner and News:

Please announce in the next issue of your journal that the Kentucky State Medical Society will convene in the city of Louisville on Wednesday, May 22, 1901, and continue in session three full days. The Committee of Arrangements, of which Dr. Louis Frank, of Louisville, is Chairman, and who is assisted by an able coterie of gentlemen, is open for the reception of business. All communications pertaining to "business" should be addressed to Dr. Frank, who will give quick and courteous response.

Those who expect to contribute to the scientific part of the "Forty-sixth Annual" will please notify the Secretary, sending their titles of papers at as early date as possible. It should be remembered that those who first come are first served—on the programme, which will be issued from the press and distributed about the 20th of April. Already interest has begun to manifest itself. We hope the members of the profession throughout the State will take an earnest interest in this meeting.

Yours very truly,

STEELE BAILEY, M. D., *Permanent Secretary.*

J. H. LETCHER, M. D., *President.*

January 8, 1901.

MY DEAR DOCTOR: Without a day's notice and without any complaint to me or criticism of my editorial management of the "Philadelphia Medical Journal," I have been discharged by the Board of Trustees. I have not been allowed to explain this act to the subscribers of the Journal nor to say a word of goodbye to them. So long as I controlled the reading columns I did so to the uttermost of my ability with the purpose of keeping them wholly free from the influence of any publisher, from commercialism, and from a hundred forms of medical abuses, lay and professional. I have also aimed to give subscribers the most and best literature for the least money possible. In a word, I have sought to establish a great American Medical Weekly, with the closest attainable adherence to professional ideals and scientific usefulness. The organization of the company and its control by lay capital permitted a failure in my attempt at realizing the purpose.

Hundreds of letters and words of encouragement are being offered, advising the founding of a new medical journal, so organized that no one person can govern its fate. I am willing to give my best of remaining life to this end, but it necessarily depends upon the co-operation of the profession to carry it out. In order to test the desire of the profession, I request an immediate reply to the following proposition: With trustworthy and competent business and professional associates and under good legal advice,

a company may be incorporated and capital stock offered to members of the profession in the following manner :

1. *Founders' Shares*, at \$50.00, giving the owner thereof a lifetime subscription to the new Medical Weekly and perpetual participation in the profits. (The number of Founders' Shares is limited, and the holders will secure a pre-eminent influence in the ownership and conduct of the journal. It is our purpose to make it an honor even to one's children to have been a Founder.)

2. *Preferred Shares*, drawing 6 per cent dividends from the net earnings, subscriptions to which are requested in amounts of \$100.00 and over. (The Preferred Stock offers a safe, permanent, and profitable investment.)

3. For \$10.00 three years' subscription to the Journal and \$10.00 worth of common stock. (The common stock participates in dividends upon the net earnings after those paid upon Preferred Shares.)

4. For \$5.00 one year's subscription to the Journal and \$5.00 worth of common stock.

These offers, any one or all, may be withdrawn at any time and without notice, when a sufficient working capital has been secured. We purpose maintaining the par value of the stock, and shall issue only sufficient for a safe working capital, thus insuring full dividend-value on all investments.

In order to enlarge and perfect the new Weekly so far and fast as possible, the subscription price will be placed at \$4.00.

By the above plan there will be an absolute security that no combination of capital and no lay owner or publisher can ever obtain control of the journal. Thus at last may be satisfied the greatest need of the American medical profession, for a great organ free from the domination and dangers illustrated in the newspaper world, and unfortunately too frequently in medical journalism.

I do not wish money sent at present, but only a reply *at once* as to your willingness, and to what extent you will give the project your financial support. This letter is designed merely as a test of professional opinion. If sufficient funds are promised, details of plans, prospects, and possibilities will be sent promptly. I wish to issue the first number of the journal in February.

The New Century opens with a most prosperous commercial outlook. With your hearty practical interest we shall be able to realize the early establishment of a representative organ of the profession and for the profession.

A postal card blank is enclosed, upon which your conditional offer may be indicated, and the same mailed to my address. Faithfully yours,

GEO. M. GOULD,
1321 Walnut St., Philadelphia.

Current Surgical and Medical Selections.

DISPOSING OF THE KIDNEY THROUGH LIGATING THE URETER.—L. Landau. (*Deutsche Med. Wochenschrift.*) In abdominal and pelvic operations the ureter is often severed by mistake, or through necessity. This is especially the case in carcinoma of the uterus and other pelvic organs. Where possible a plastic operation should be done, transplanting the end of the ureter into the bladder. Sometimes, however, such large sections of the ureter are removed with the tumor mass that transplantation is rendered impossible. The author reports such a case, in which he ligated the end of the ureter, with a view of performing a nephrectomy later, viz., after the patient had gained strength and recovered from the shock of the operation. To his surprise, however, further interference was not indicated. For a short time after the operation the patient complained of headache, etc., and the quantity of urine was diminished. Shortly all of these symptoms disappeared, and the patient made an uneventful recovery. The other kidney carried on the function properly, and the excluded kidney ceased to functionate. Hydronephrosis did not occur; at any rate it was not evident. There are several such cases recorded in the literature, with the same satisfactory results. The author recommends this procedure only where transplantation is not possible and nephrectomy contra-indicated.—*St. Louis Med. Review.*

SOME POINTS IN THE MAKING OF A PLASTER OF PARIS JACKET.—(Albany Med. Annals.) By Dr. J. V. Hennessy. The author describes the case of a girl twenty-two years of age, who weighed 130 pounds. She had Pott's disease of the lower dorsal vertebræ and paraplegia of two years' standing. Ordinary methods of applying a plaster jacket by suspension failed through syncope; in the recumbent position faulty position spoiled them, and the patient could not sit.

The mode adopted in this case was to make a form of plaster of Paris from numerous measurements giving width, depth, and girth at hips, waist, and bust. On this an ordinary knitted cylinder was stretched, and the plaster applied as upon the human form. The advantages of this method of making a plaster of Paris jacket are numerous, although the trouble and care are considerable. In the first place, certain modifications of form can easily be made, as may be seen in this specimen. The dorsal deformity is exaggerated, leaving a considerable space so that the spinal protuberance may not rub against the jacket. Next, extension of the trunk may be increased by increasing the length between the crests of the ilium and the axilla. The waist measurement may be diminished and gradually widened upward, giving the support to the trunk which is so necessary, and any other modification of form which may, in the judgment of the maker, add to ease or efficiency. Again, a jacket may be applied to a form so built up

with ease and deliberation, which is impossible with the often tired and moving patient. The other points apply to a jacket, whether made upon a form or upon a patient. First, the ordinary plaster of Paris roller bandage being used, a jacket is made as under ordinary conditions, except that much fewer thicknesses are employed, say, six or seven thicknesses of crinoline and plaster. This having been allowed to set, is cut up in the median line, removed and allowed to thoroughly dry. We then have an extremely light jacket which would certainly have little sustaining power. It is then covered with sheepskin, fastened on by applying glue (Page's prepared) to the inner leather surface, and to the surface of the jacket. First, a binding about two inches wide covers the cut median edges, then an encircling piece of leather is applied to the upper third of the jacket, the edges projecting above being turned inside, and there forming a binding for the top. The same is done for the bottom third, these pieces reaching to the median line and extending so as to form a double thickness over the binding in the median line. To this, shoe hooks are fastened for ease in lacing. The leather used is a thin sheepskin of inferior quality, a whole skin costing only fifty cents. The leather, glue, and plaster combined form a light, stiff, and decidedly durable corset. In certain parts where more strength may be deemed necessary, one or more extra thicknesses of leather may be easily applied, as in this jacket, where an axillary pad may be seen under the binding.—*Journal of Surgical Technology.*

COMPLETE PRIMARY AMPUTATION OF THE UMBILICAL CORD.—R. L. Dickinson (British Med. Jour.), in a paper read before the American Gynecological Society, makes a plea for the general adoption of a more scientific method of treating the umbilical cord at birth. The present plan of distal ligation, followed by separation of the stump by a process of dry gangrene, is hard to reconcile with modern antiseptic principles. From statistics derived mostly from lying-in hospitals and foundling institutions, the conclusion is drawn that a large proportion of the heavy mortality which occurs almost universally during the early weeks of infant life is due to navel infection. At the Innsbruck Maternity Hospital, out of eighty-one autopsies on dead infants, in 16 cases the cause of death was ascertained to be umbilical sepsis, this having been unrecognized during life in the majority of the cases. Arteritis, phlebitis (often causing jaundice), suppuration, erysipelas, pyemia, and similar conditions have been noted by different observers in connection with umbilical infection. The method advocated by the writer is amputation of the stump at birth, and dry dressing of the resulting skin wound. The vessels may be ligated separately, although this is not necessary. If the ligation method is used, the cord is partially thorough around the edge of the skin cuff until only the vessels remain; these are all tied together with a single silk or catgut ligature and then divided. They immediately retract, then the skin cuff is turned in, and a pad of dry gauze or a collodion dressing is applied. The child should be

bathed after the operation, and should not have a complete bath again for a week, by which time the wound at the navel will be healed. Ligating the vessels is not, however, necessary; the cord may be cut off at once with scissors, the stump pinched between the fingers and thumb, and the edges united by suture; a little oozing sometimes follows, but pressure with a pad always controls it.—*The Amer. Gyne. and Obst. Journal.*

TUBERCULOSIS AND PREGNANCY.—(M. S. Bernheim, in the Obstetrical Section of the International Congress of Medicine, *La Presse Medicale*.) The author draws the following conclusions from his own personal observations and the writings of others:

1. Pregnancy does not provoke fatal tuberculosis in those predisposed to it. Latent or old tuberculosis is not revived by a single simple pregnancy. In predisposed persons the younger the patient the more likely is pregnancy to provoke tuberculosis; hence, it is wise for young girls not to marry too early if there is any chance of their being predisposed to tuberculosis.

2. Tuberculosis is much more aggravated by pregnancy if the lesions are gross and well marked.

3. If a single pregnancy sometimes has no effect on a dormant tuberculosis, it is not the same with multiple pregnancies, which are always disastrous.

4. The puerperium is always to be dreaded in phthisical patients, and suckling should be prohibited.

5. In all cases where tuberculosis is aggravated during the first weeks of pregnancy it is sound practice for the physician to induce premature labor.

6. The influence of paternal tuberculosis can practically be considered as nil.

7. Tuberculosis in women is a frequent cause of abortion.

8. After labor the baby ought always to be removed far from sources of contagion, and if placed in suitable hygienic surroundings has a fair chance of growing up healthy and strong.—*Treatment.*

LEUKEMIA.—According to the Medical News, C. Y. White says that leukemia is a form of anemia characterized by the presence of a very large number of white blood-cells and a reduced number of red blood-cells.

All the forms of white cells in the blood are increased in number, but not all of them equally. This gives rise to certain types of leukemia. Two special forms of cells have been described as occurring in leukemia—the neutrophilic myelocytes and eosinophilic myelocytes. The presence of these cells, however, is not pathognomonic of leukemia, for they have been found in other blood disturbances and in certain infectious fevers. The study of the microscopic character of the blood has led to a division of leukemia into two types, viz., the spleno-myelogenous and the lymphatic forms of the disease. Spleno-myelogenous leukemia is really a pernicious anemia with an increase of the white cells and the presence in considerable

numbers of the neutrophilic and eosinophilic myelocytes. Lymphatic leukemia presents less degeneration of the red blood-cells and less disturbance of the normal form of the white cells and of the proportion between the different forms of white cells existing in normal blood. In a word, there is less disturbance of the blood-making organs. It is evident that further study of the minute characters of the white blood-cells will enable us to draw more definite conclusions as to the course of cases of leukemia and their ultimate prognosis.

Practically the only remedy that has done good in certain cases of leukemia is arsenic. It should be given in increasing doses, as the tolerance of the patient will permit, and should be continued for long periods of time, but with interruptions in order to avoid the production of complications that sometimes follow the arsenic treatment. It seems worth while noting that in two cases of leukemia in which abdominal operations were done there was for a time after the operation a reversion to the normal number of leucocytes in the blood.—*The Charlotte Med. Journal.*

A CASE OF ACUTE (TRAUMATIC) TETANUS SUCCESSFULLY TREATED WITH ANTITETANUS SERUM.—Sydney H. Dong (London Lancet). According to the more or less generally accepted view as regards the pathology of this disease, the poison, manufactured at the seat of inoculation, has a selective affinity for the cells of the nervous system, this affinity being greater for the spinal cord than for the brain; that the poison becomes fixed in the cells; that the cells of the nervous system have, according to laboratory experiments, a much greater affinity for the tetanic toxin than for the antitoxin: and that, although the latter will confer a certain immunity if injected hypodermatically before the disease is developed, yet it has been held of late that, if given in this manner, it has little or no power of neutralizing the effects of the toxin when once symptoms have appeared. Having watched the records, I have been struck with the comparative smallness of the dose that has been given in nearly all cases, and I have, rightly or wrongly, concluded that herein, in part, lay the cause of the continued high mortality of the disease. I determined at the first opportunity to give the antitetanus serum what I considered a fair trial. The case was a lad, aged thirteen, who acquired tetanus from injuring his toes by nails in his boots. In all thirteen injections of serum were given hypodermatically and fifty-five per rectum, and a total of 680 c.cm. of serum were used. The patient made a slow but uninterrupted recovery.—*St. Louis Med. Review.*

THE RADICAL TREATMENT OF TUBERCULOSIS OF THE TESTIS.—A. V. Moschowitz (N. Y. Med. Rec.), New York, says: Radical treatment of tuberculous orchitis would have to include, besides extirpation of the testis, also extirpation of the entire *vas deferens*, together with the corresponding seminal vesicle. The following method is recommended: Castration is performed by the usual method and through the scroto-inguinal incision, with

the exception that the vas is primarily not divided at the level of the vessels, but is carefully isolated and left in connection with the testicle; then as much of the vas is pulled out of the inguinal canal as can be done without danger of tearing it off. After placing a ligature around it, it is divided, and the proximal end is seared with a Paquelin cautery. The external incision is then closed. The patient is then placed in the lithotomy position, a sound is introduced into the bladder to serve as a guide, and a curved incision is made in front of the anus. Dissection is then continued until the levator ani, or the so-called levator prostatae, is reached, the urethra being held to the front by a blunt retractor. After division the muscle retracts, and the prostate and diseased seminal vesicle are reached by the finger. The finger of the left hand is hooked over the upper border of the prostate through the rectum, and traction is exerted. If necessary, the seminal vesicle may be grasped by a clamp, and by gentle traction may be brought down still further. In this manner the entire unruptured vesicle and the remaining portion of the *vas deferens* are brought into view. These are now attached only by the ejaculatory duct, which can be readily cut off. Tamponade of the wound, and possible the insertion of one or two sutures into each angle of the perineal incision, terminate the operation. A case is reported in which this method was followed with success.—*Georgia Journal of Med. and Surgery*.

COMPLETE RUPTURE OF THE UTERUS AND EXTIRPATION: RECOVERY.—

In the *Centralblatt für Gynakologie*, 1900, No. 19, Walla reports the case of a multipara in labor with tranverse position of the fetus. The physician summoned to the case performed version and readily extracted the child and placenta. The vagina was tamponed with iodoform gauze. When the patient was admitted to the hospital and examined, a complete laceration of the uterus was found, extending across the anterior wall down to the connective tissue behind the bladder. The patient was in good general condition, having a pulse of 108 and a temperature of 99.5° F.

Operation was decided upon for the following reasons: The patient was in good condition, although the laceration was extensive. The slight rise of temperature which was present gave an indication that septic infection very possibly had begun. The patient had been delivered in a tenement house, and had been examined by a midwife. It was scarcely possible that under these circumstances she was in a perfectly aseptic condition.

The uterus was extirpated by abdominal section and extensive laceration of this organ found, extending into the parametrium of the right side. The patient reacted fairly well from the operation. During sixteen days afterward she suffered from fever, and an infected blood-clot was removed through the vagina from the right side of the pelvis. Formation of pus followed, which gradually ceased under the use of cleansing douches. The patient ultimately made a good recovery.

In the same clinic at Buda-Pesth previous experience with these cases had been as follows: There had been in the clinic 28 cases of rupture of the

uterus, of which 17 had been incomplete and 11 complete. Of the 17 all were treated without operation, but by the use of gauze drainage introduced through the vagina. Seven of these patients recovered; 10 died. In the 11 cases of complete rupture 6 were treated without operation, and all of them died. Of the 5 remaining, 3 died and 2 recovered after operation. The causes of death in the cases operated upon were sepsis in one case, acute anemia following hemorrhage in another, and in the third hemorrhage following the slipping of a ligature upon the left spermatic artery.—*Amer. Jour. of Med. Sciences.*

TREATMENT OF PROSTATIC TUBERCULOSIS.—(Sarda, Toulouse, *Archiv. provincial de Chirurg.*) In treating prostatic tuberculosis by local medication there is little success. Often surgical treatment is not desirable. It is best to incise the perineum in front of the rectum deeply, and then curette. If an abscess points in the perineum, an incision one finger's breadth anterior to the anus should be made. In tuberculosis of prostate without abscess formation, it is desirable to establish a perineal fistula. If a fistula exists, it should be extended into the prostate. In performing prostatectomy, especially if the seminal vesicles are not to be removed, the long incision is recommended.—*The Med. Fortnightly.*

THE HEART IN LIFE INSURANCE.—(Upshaw, Atlanta Jour. Rec. of Med.) Policies are often refused unjustly, and, on the other hand, are often issued when they should not be. An applicant with a functional murmur, either hemic or from reflex irritation from overwork, indigestion, etc., should be re-examined at short intervals to determine the true condition of the heart. A bruit without hypertrophy or displacement to the right does not affect the risk. Cases in which an acute endocarditis with valvular lesion in childhood was recovered from with perfect compensation and a normal circulation should not be rejected. In obese persons past middle age any irregularity should be looked on with suspicion. No risk is first-class when the sound of the valves fail in clearness and is muffled, showing rigidity and loss of elasticity. In applicants who are reformed alcoholics the chance of changes in the heart walls allows them to be rated as fair only. Tobacco heart is a practical entity, and sudden death from heart failure is not so uncommon as to preclude the gravest consideration in determining the value of such a risk.—*The Med. Fortnightly.*

Special Notices.

BLOOD TREATMENT OF DUODENITIS.—John O'Connors, age thirty-two, Irish; admitted January 1, 1900. Diagnosis, duodenitis. The patient complained of having been a sufferer for some four weeks, and during that time had been under the care of one of my colleagues, who had exhausted all treatment he knew of to accomplish a relief for the patient, but without effect. He therefore brought the patient to me. He

was suffering from nausea and vomiting; stools were frequent, containing little fecal matter, greenish-yellow in color, mixed with undigested food. He had no appetite, and suffered greatly from distress in the stomach when he did eat, and was so weak that he could hardly stand. He had a temperature of 103°, and suffered considerably from paroxysmal colicky pains situated above the umbilicus. There was considerable localized tenderness above the duodenum. The patient was put to bed, and the rectum, as high up as the sigmoid flexure, was washed out with cold Thiersch solution, followed by a bovine-pure injection. He was put on a half teaspoonful of bovine in limewater every half hour, and one eighth of a grain of codea every three hours.

On January 7th the bovine was given, a teaspoonful every hour in limewater, alternating with peptonized milk. January 15th the patient's fever had subsided; the stools were less frequent and contained some fecal matter; vomiting and nausea had disappeared; paroxysms of colic were greatly reduced in severity; the patient was stronger and the abdomen less tender. The bovine was now increased to a wine-glassful every three hours. From this time on the patient made an uninterrupted recovery, and was discharged cured January 27th, feeling, as he expressed it, "splendid."

T. J. BIGGS, M. D., Stamford, Conn.

WORTHY AND SEASONABLE.—When the temperature of the body is above normal, conditions are especially favorable for germ development. It is a matter of every-day observation that a simple laxative is often sufficient to relieve the most threatening situation and prevent the most serious complications. To reduce fever, quiet pain, and at the same time administer a gentle laxative and strong tonic is to accomplish a great deal with a single tablet. We refer to Laxative Antikamnia and Quinine Tablets (a tonic-laxative, analgesic, and antipyretic), each tablet containing:

Cascarin,	gr. $\frac{1}{8}$;
Aloin,	gr. 1-32;
Extract belladonna,	gr. 1-32;
Podophyllin,	gr. 1-32;
Quin. bisulph,	gr. 1 $\frac{1}{4}$;
Antikamnia,	gr. 3.

Among the many diseases and affections which call for such a combination, we might mention la grippe, influenza, coryza, coughs and colds, chills and fever, and malaria, with its general discomfort and great debility. We would especially call attention to the wide use of this tablet in chronic or semi-chronic diseases.

THE PREDATORY MOSQUITO.—Every physician who "keeps tab" on the advances and discoveries of medical science is now aware that there are two kinds of mosquitoes, the good and the bad. We presume, however, that some one will dispute this statement, and say of this insect as the average army officer says of the Indian: "There's no good mosquito but a dead mosquito." It is true that they all sting, but some of them add insult to injury by injecting the malarial virus into her unsuspecting victim. We say her, because we believe the male mosquito is a better-behaved insect than his spouse, and does not "present his little bill" at inconvenient times. These few remarks are but prefatory to the announcement that the Palisade Manufacturing Company has prepared and is now mailing to physicians an illustrated folder, showing in sepiæ the distinctive differences between *Culex* (the non-malarial) and *Anopheles* (the malarial) mosquito, with instructions as to how to detect the good insect from the bad. A copy will be mailed to any physician who has not as yet received one.

A VALUABLE HYPNOTIC.—Every progressive physician recognizes the necessity of overcoming the insomnia attending certain diseases. At this season of the year, when pneumonia is so prevalent, probably nothing will so satisfactorily relieve the distressing symptoms of sleeplessness as Bromidia. By the use of this reliable preparation we can obviate the effects of losing sleep and at the same time feel that the heart's action is unimpaired, a dire calamity in a pneumonic process.—*Vermont Medical Monthly.*

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

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No. 3.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

SURGICAL TECHNIC IN COUNTRY PRACTICE.

BY E. J. KEMPF, M. D.

Introduction. Dr. J. P. Salb, of Jasper, Ind., and myself do the major surgery occurring in our practices together; in every case one is the other's assistant. Among the operations thus performed are seven herniotomies, two ovariectomies, nearly a dozen laparotomies, seventeen operations for appendicitis, bone operations, amputations, trephining, etc. These operations were as a general thing operations of necessity rather than elective operations. While neither one of us claims to be any thing except a general practitioner, and do not make surgery a speciality, we have never refused to perform any operation when indicated, and whenever the operation offered the faintest chance, no matter how desperate the case might be. Though we can not repeat the oftentimes heard assertion of the sanitarium surgeon, "several hundred operations performed without a death," and acknowledging that surgery performed on the dying patient can bring no honor, we do make this assertion, that in no single instance have we had any trouble, such as sepsis, secondary hemorrhage, etc., which could be traced to negligence or faulty technic. This is a proof that our technic was good under the circumstances, and it may be of sufficient interest to the reader of this journal for me to give a short description of our mode of procedure in a major operation.

The Room. Our operations were all performed at the patient's home. We chose the best room, considering the light first and the

warmth next. If possible, the room was cleaned the day before the operation, while in emergency cases the room was severely let alone. The main object was to have the room as free from dust as possible.

In preparing a room for an operation we made use of the material at hand. Generally there was only one table in the house, and it had to be used as an operating-table. The Trendelenburg position is made possible by placing a chair in an inverted position on the table. Two small tables, or oftentimes two boxes, served as instrument stands. The tables or the boxes were washed off outdoors, brought into the room and fixed up by the assistant. A clean blanket or two were placed on the table, and over it a sterilized clean sheet, and on this was placed a disinfected Kelly's pad. A clean pillow and a clean sheet to cover the patient were also made ready. The instrument tables or boxes were covered with clean towels. A nest of granite washbasins, a fountain syringe, a granite pitcher for salt solution, and several smaller granite dishes were brought along by the surgeon, and whenever the time allowed it they were sterilized by boiling, otherwise cleaned with hot water.

The Patient. If the time allowed it, and if the nature of the case demanded it, the patient's bowels have been well and thoroughly moved by means of Rochelle salts administered for a day or two before the operation and followed by enemas. In abdominal operations the bladder is emptied with a catheter and refilled with boric-acid solution if the operation is made on the bladder.

The patient was always shaved the day before the operation if possible, or immediately preceding the operation, by the assistant, and then repeatedly scrubbed with soap and water. Then the patient was washed with whisky, and then again with soap and water, after which towels dipped in a corrosive sublimate solution enveloped the parts to be operated upon. A clean shirt or gown, if the patient had one, which was not always, I might say not often, the case, and a clean pair of long stockings were put on the patient. Then covered with the sterilized sheet, the patient was ready for the anesthetist and turned over to him.

The Anesthetist invariably gives chloroform, because we are used to it and understand its use, and consequently fear it less than ether. So far we have had absolutely no serious trouble with chloroform. We always use an Esmarch inhaler with a chloroform-dropper. Of course the patient has abstained from eating for several hours before the operation unless it is an emergency case. Sometimes a drink of whisky

or a hypodermic injection of morphine and atropine are given before the giving of the anesthetic if we conclude that either is indicated.

The Surgeon. In each case one of us is the surgeon, depending on in whose practice the case occurs, and the other acts as assistant. No one else is allowed to handle either the patient or the instruments, either before or during the operation. This diminishes the risk of infection. The doctor who gives chloroform for us is not allowed to do any thing except attend the anesthetic and watch the condition of the patient. No other person is ever allowed to do any thing before or during the operation in any way connected with the operation.

When possible the surgeon, the assistant, and the anesthetist take a hot bath the night before the operation, but this is never inquired about nor insisted upon. As to the clothing, we are careful not to have the clothes on in which septic cases had been visited, but even this was not insisted upon in emergency cases. Both of us are clean-shaven and have our hair trimmed frequently. Before every operation the hands are washed with soap and water, a hand-brush being used freely. This washing of the hands was frequently repeated, the finger-nails being cleansed with a pocket-knife at the first scrubbing. The hands and arms to above the elbows were scrubbed and washed as often as five or six times before an operation was commenced. Nothing else was used to disinfect or sterilize the hands, except a dipping solution of corrosive sublimate, 1 to 1,000, immediately before an operation.

After the surgeon, the assistant, and the anesthetist have cleansed their hands and arms, they each one put on a clean sterilized gown of muslin with short sleeves. From this time on the surgeon touches nothing but the patient and the instruments, and the assistant nothing but what the surgeon may need.

The Assistant. It is the duty of the assistant to prepare the patient for the operation, while the surgeon arranges the instruments, appliances, and dressings to suit the case and the circumstances.

The assistant cleanses and prepares himself the same as the surgeon. It is his duty to look after every thing as soon as the operation has commenced, so that the operator can concentrate his attention and his work directly to the operation and to the patient. He handles the solutions, the sponges, the instruments, the washes, and any thing else that the operator may need. He assists in the operation, and if a critical time arises, he may be called upon for advice or an opinion as to what is best to do.

After the operation the assistant and the anesthetist clean up the room and the instruments, while the operator attends the patient.

The Appliances. We buy our gauze, iodoform, carbolated or plain, in small packages, prepared by a reliable firm (Johnson & Johnson), as also our cotton, plain or borated, sponges, adhesive plaster, oil silk, etc. These packages are opened immediately before an operation, and are handled only by the assistant as the operator needs them.

The water used during the operation, before the operation, and in any way connected with the operation is boiled for at least an hour before the operation and then allowed to cool off. This is never varied from, even in cases of emergency. This water is used to make the solutions: Corrosive sublimate, carbolic acid or saline.

The sutures and ligatures: Silk, catgut, and silkworm gut are bought in original sterilized packages, put up by a reliable firm (Johnson & Johnson), and the packages are opened before the operation and handled only by the assistant as the operator needs them. Sponges are made by sewing up cotton in gauze, and then we sterilized these sponges so made by heat or steam. For large sponges we used sterilized plain towels or gauze. All gowns, towels, sheets, bandages, etc., used during the operation are previously sterilized by heat or steam.

The instruments are boiled in a two-per-cent solution of bicarbonate of soda (which in an emergency can be found in any kitchen) and then wrapped in sterilized towels, in which they remain untouched until they are unwrapped by the assistant or the surgeon just before the operation and spread out on one of the two tables or boxes. The other table or box is used for the solutions and the dressings. When time is not an issue, the instruments are sterilized by heat or steam.

The knives used during the operation are washed first in soap water, and then dipped in a weak carbolic acid solution to prevent the dulling of the edge. A sharp knife to cut through the skin is, according to our ideas, a necessity. Afterward, that is, after the skin is cut, a dull knife or a dry dissector is an advantage.

The Operation. The surgeon, either Dr. Salb or myself, performs the operation, relying for assistance on the assistant solely. By working thus we get used to each other and understand each other very readily, often anticipating each other's thoughts, and we also diminish the danger of infection very much by not allowing others to assist or to meddle in any way. We endeavor to perform a dry operation, using

sponging freely. Washing out the wound with fountain syringe or by pouring the solution from a pitcher is only done in septic cases, or where sepsis is suspected. After the wound has been sewed up, or if it is to be an open wound, as may be necessary in large abscesses, etc., it is dusted with iodoform and confined or packed with iodoform gauze. Over this iodoform gauze is placed plain or carbolated gauze and cotton in greater quantity. This is done to economize, as our patients are generally poor and can not pay much. The biggest fee I ever got for any operation was twenty-five dollars. The dressings are retained either by bandages or by adhesive strips, the latter being generally used in operations on the abdomen.

The After-Treatment. Of course, the after-treatment depends very much on the circumstances and symptoms, which differ with every operation. To prevent and to overcome shock, warmth is applied by means of hot plates wrapped in newspapers or clean rags and placed around the patient.

Absolute rest at all times and under all circumstances is always insisted on. The nursing is always looked after by the doctor in whose charge the patient is, as the expense of a trained nurse can not often be afforded. For the vomiting following operations, which greatly varies in different cases, a little cracked ice or a teaspoonful of hot water or a teaspoonful of hot black coffee, or a teaspoonful of water acidulated with muriatic acid, is used as the surgeon may determine.

Abstinence from eating or drinking for from twelve to twenty-four hours is insisted upon in all cases. Where nutrition is demanded, it is given by enema. High enemas of hot saline solution are frequently administered. If the patient is very restless or suffers from pain, a hypodermic injection of morphine and atropine is frequently used. Strychnine sulphate, hypodermatically administered in doses of 1-30 grain, is used if the pulse indicates it. Symptoms are treated as they arise. The bladder may need emptying. The wound may need attention. The bowels may be distended by gas and need to be relieved. Fever may come up, and has to be looked after.

In Conclusion. I have described no particular operation, but only the way and manner of performing any operation that may have occurred in the practice from day to day. Circumstances sometimes made changes necessary. Sometimes only two doctors could be present, the anesthetist and the operator; or it has occurred that the doctor has to rely on himself. In the latter instance the doctor would

give chloroform, then dip his hands into the corrosive sublimate solution and perform the operation before the patient came from under the influence of the anesthetic. However, the proceedings preliminary to the operation, during the operation, and after the operation remained always as I have described, as nearly as circumstances would permit.

JASPER, IND.

WHAT IS NORMAL MENSTRUATION?*

BY GEO. J. ENGELMANN, M. D.

What is normal menstruation? or, more correctly, *What is the menstrual condition of the average girl in average health?* is a question which may well be asked. Familiar as we all are in a general way with the condition, we have no complete and positive knowledge.

The menstrual period proper is the entire period of disturbed equilibrium, of intensification and depression, though usage has confined the term to the time of depression of the hemorrhagic flow, regardless of the preceding period of intensification, and I shall here follow the general custom.

During this time physical endurance, judgment, mental acumen, and capacity are affected; the circulation is disturbed; pulse, temperature, blood-pressure, pulmonary capacity, nerve tension, and muscle force fluctuate. Such changes are noted with every recurrence of the flow, and the oncoming of the function, the advent of puberty, is like a tidal wave, with a depression similar in character, but more far-reaching, and preceded by an intensification of all vital powers which more deeply influences her entire being.

Hegar, Reinl, Meyer, de Ott have taught us much, and the classic study of Emmet has clearly traced certain phases of the period in later life, but the knowledge we possess is based upon the revelations of hospital and clinic, or consulting-room; it is from the sick; of the healthy we know nothing.

Investigation has not yet revealed the actually existing status in the average girl in good average health, in puberty and adolescence. This I have attempted, and here present the facts as culled from the records of nearly five thousand cases, from high and normal school, from college and department store, girls between fifteen and twenty-

*Abstract of paper read before the Southern Surgical and Gynecological Association at Atlanta, November 13, 1900.

six, the majority between eighteen and twenty-two, in rather better than average health, and in numbers sufficient to admit of positive deductions. While as to the details every case is a law unto itself, these numbers permit me to trace an average, and also laws which determine variations from such average, but it is the average of existing conditions only I here present.

Recurrence. The function is supposed to recur monthly, every twenty-eight days, but this is true of only some 31 per cent, the larger number being retarded, 45 per cent, and 24 per cent recurring in less than twenty-eight days; there is a wide range, between twenty-one and forty-two days, with extremes far beyond these limits, most frequently in a multiple of seven; fully 50 per cent are irregular—that is, do not recur with regularity to the day; a variation of over two days is very common, especially from twenty-six to twenty-eight and twenty-eight to thirty; frequently it is seven days, from twenty-one to twenty-eight, and but rarely over three weeks, from twenty-one to forty-two days. This irregularity increases distinctly by at least 10 per cent as duties become more stringent, application, mental or physical, more intense; mental exertion shortens the interval; physical strain, if not too great, rather tends to prolong.

The average frequency in one freshman class was 36.75 days, a prolongation due to change of habits, but I have found no average of any larger number below 26.56, and this was in a senior class with hard study.

Recurrence, like all other phases of this function, is influenced by circumstances and surroundings, by conditions, mental and physical, more especially in the early years, when the system is most impressionable; later the tissues are more resistant, the nervous and mental balance more perfect, so that variations are less frequent, and minor disturbances no longer affect the function. I find in a normal school, in one group of students the average of 27.03 days reduced to 26.56 by closer application and more serious work, while in another group, in better physical condition from more exercise and more hours of physical training, the change was decidedly less, and their average nearer normal, 28.43 days.

Duration. The average duration, varying in different groups from 4.4 to 5.5 days, is 4.6 days, much the same as that found by Emmet, who notes 4.82 as the average at puberty for those in the best of health, who are regular from the first, with a change to 4.66 for the same in

after life. The variation is from two to seven days, with very few beyond these extremes, the largest numbers at four and five days. Of one thousand freshmen, 30 per cent, four days; 31 per cent, five; 9 per cent, six days. Shorter in the girl at work—20 per cent, three; 23.8 per cent, four; 24.25 per cent, five; 10 per cent, six days. Rarely do we find the highest average of a group of girls at study, as in one college 40 per cent from five to seven days.

Suffering varies with different groups between the extremes of 32 per cent and 95 per cent, more generally from 50 to 80 per cent, averaging 67 per cent. In this I include moderate pain. From 11 per cent to 18 per cent suffer severely. As a rule there is an increase of at least 10 per cent, with increase of mental strain in higher grade schools, but in a few modern, well-managed institutions, where proper attention is given to arrangement of study hours and to physical training, I note decrease of suffering.

The average for school and college is 40 to 70 per cent; for the girl in the department store, 83 per cent, differing with kind of work; least among floor-walkers, and those who move about, 78 per cent; clerks and stenographers, sitting, 85 per cent; saleswomen, those who stand, 91 per cent. By the seventeenth year the largest amount of suffering has developed, increasing as a rule with difficulty or strain of work.

Work, mental and physical, is *more trying and more wearisome during the period of depression*, as is admitted by at least 65 per cent of students and working-girls; more so as work is more severe; more so in younger years. In one college 83 per cent of a senior class preparing for the first examination find work harder, and only 69 per cent of the junior class admit this. In a normal school 69 per cent of those with but two periods of physical training weekly so state, while only 52 per cent of those who give more time to body development feel the same relaxation. Eighty per cent is the average among working-girls, varying from 78 to 91 per cent, according to the kind of work.

The most convincing proof of the impaired condition of the system, the existing lassitude and depression, is presented by the number of those who seek relief from the daily routine of duty, who are excused from work or study during the period of greatest relaxation, at the beginning of the flow.

This is done for two reasons:

1. For the sake of prevention, and protection against injury during this period of increased susceptibility.

This has of recent years been done to some extent by the advice of physicians here and there, but in some prominent private schools in our large cities the number habitually excused as a precautionary measure is surprisingly large; in one 60 per cent, in another 24 per cent, with 46 per cent excused at times. This, of course, is in the smaller fashionable school, where urgent necessity for close application does not exist, though some of the girls are preparing for colleges.

2. Necessity obliges others to rest by reason of their disability to perform the usual duties, and 30 *per cent are more or less frequently excused from work or study* on account of debility or suffering during the first day or two of the flow.

This is true of the higher institutions of learning, of normal school and college, as it is of the occupations, with variations determined by intensity and strain of duty; more in higher classes than in lower; more in the trying forms of work, saleswomen, and those who stand.

Few are habitually excused, yet always some, and in exceptional cases as high as 17 and 20 per cent. Even nurses, who are supposed to enter upon training in perfect health, show 14 per cent occasionally excused from recitation, and 17 per cent from the physical duties of their work.

The claims of necessity in the struggle for existence must yield to this lowered vitality of the period.

Resume. In brief, the menstrual period proper is characterized by an intensification of all vital energies, followed by a depression which appears with the coming of the flow, and this latter is the phase ordinarily termed "menstruation." Under ideal conditions and in perfect health the physiological status is such that this epoch, preceded by a day or two of heightened activity, is marked by a moderate lassitude, mental and physical, the flow persisting for from four to five days, and recurring at regular intervals of about twenty-eight days. It is a period of heightened susceptibility, and so sensitive a barometer that it quickly records any variation from the normal. Excitement or fatigue, mental or physical, are promptly indicated by variation in this function, and in our every-day life such disturbing elements constantly occur, so that conditions actually existing vary greatly from this ideal.

The average period of the American girl in average health presents very different features: Regularity in 50 per cent only; recurrence every twenty-eight days in 30 per cent, varying most frequently from twenty-six to forty-two days, 45 per cent being over twenty-eight; duration

varies from two to seven days, averaging 4.6; from 66 to 70 per cent suffer more or less, the number of sufferers varying, according to age and intensity of occupation, between 30 and 90 per cent; lessened ability for exertion, mental or physical, is admitted by 60 per cent; some few are habitually incapacitated from work, and 30 per cent occasionally.

The functional condition of the girl in good health, under modern conditions of life, is by no means the ideal one, and, in fact, the functional health of the American girl, the coming mother of American men, is far from what it should be by right of inheritance and surroundings. This fact we must recognize, we must face. Upon physicians and educators devolves the duty of study and correction of the evil.

208 BEACON STREET, BOSTON.

THREE CASES OF DISEASE OF UNUSUAL CHARACTER.*

BY T. B. GREENLEY, M. D.

On September 23d I was called to see Mr. R., a young man twenty-five years old. When I stepped into the room and noticed his rapid breathing I thought he was dying from congestion of the lungs. He was panting 64 times a minute; pulse 120, and temperature 106.5° F. He was partially conscious; complained of severe pain in left side. Taking all the symptoms together, I did not think he would live longer than a few hours.

I had never seen a grown person breathe so rapidly, and only one that had as high a temperature. Many years ago I was called in consultation to see a lady with typhoid fever the day she died, with a temperature of 108.5° F.

On examination I found in Mr. R.'s case no pneumonia, as I first thought, but pleurisy in left side. He had a typhoid tongue. I learned he had a chill the evening before, but as to the special trouble I was at a loss to say.

Treatment: I had him stripped and scrubbed off with hot soap-suds, and prescribed quinine and acetanilid, each 4 grs., with calomel, 2 grs. every four hours, and at the expiration of twenty hours moved his bowels freely with Ep. salts; used dry cups freely over pleuritic pain.

* Read before the Muldraugh Hill Medical Society, December 15, 1900, at Elizabethtown, Ky.

September 24th: Temperature, A. M., 102° F.; P. M., 103° F.; pulse, A. M., 100; P. M., 100; respiration, A. M., 40; P. M., 42. Treatment continued; bowels moved freely.

September 25th: Temperature, A. M., 102° F.; P. M., 103° F.; pulse, 80; respiration, A. M., 36; P. M., 32. Treatment continued.

26th: Temperature, A. M., 101° F.; P. M., 102° F.; pulse, A. M., 76; P. M., 78; respiration, A. M., 28; P. M., 28. Treatment continued.

27th: Temperature, A. M., 100° F.; P. M., 101° F.; pulse, A. M., 74; P. M., 74; respiration, A. M., 24; P. M., 24. Same treatment, except lengthened intervals of medicine to six hours.

28th: Temperature, A. M., 98.5° F.; P. M., same; pulse, 72 A. M. and P. M.; respiration, 20 A. M. and P. M. Dismissed.

I was greatly perplexed in this case as to the diagnosis, and did not make up my mind for several days whether I was treating a case of typhoid or an unusual case of remittent fever. The condition of his tongue indicated typhoid, and the variations of temperature morning and afternoon favored both. But on the fifth day I came to the conclusion I was treating a severe case of remittent fever. If I had ever aborted a case of typhoid fever in so short a time I should still be in a quandary respecting the diagnosis. At all events, I felt proud of the fact of his recovery, under all the circumstances.

CASE 2. September 24th called to see a child four years old with cholera infantum, accompanied with remittent fever. It had been vomiting and purging some eighteen hours, and had a temperature of 103° F.; pulse 136 A. M. and same in evening. Prescribed hypodermic injection of morphia and atropia, which soon arrested the vomiting and purging. Then gave it powders of quinine and Dover's every four hours.

25th: Temperature 101° F. A. M.; 102° F. P. M.; pulse 120. Treatment same.

26th: Temperature, A. M., 99° F.; P. M., 100° F.; pulse 100.

27th: Both temperature and pulse normal.

CASE 3. September 28th called at midnight to see a child two years old. It had a chill the evening before, and when I saw the little thing I thought it was dying with membranous croup. It was breathing, or you might say panting or gasping for breath, 72 times a minute. At every breath it would reach its head backward and forward as fast as it could. I did not think it would live hardly an hour. Its temperature was only 100° F., and pulse 140.

When I examined it closely I found it had no false membrane, but was affected with spasmodic respiration.

I gave it 1 gr. of quinine with Dover's powder every two hours. I remained with it until after the second dose, which, with hot bath, relieved it. The next day it was playing with the other children.

I had never seen a child pant for breath so rapidly before, even with membranous croup.

MEADOW LAWN, KY.

SUGGESTIVE THERAPEUTICS.*

BY L. L. COLE, M. D.

The physician occupies a peculiar station. It is his province not only to do every thing he possibly can to prevent disease, but when it manifests itself to be ready and willing to wage a bold and fearless war against it. Nor is he confined to any particular methods or implements of warfare; but may bring to his aid any measures which a particular case would seem to indicate, and which in his opinion would be most effectual in exterminating the disease and making the sick well. Thanks be to science and to the patient labors and investigations of all the generations which have preceded us, of which we are the beneficiaries. We, in this enlightened age of the world's history, have the means for preventing and methods for combating and curing some of the most formidable complaints that flesh is heir to. As the years go by medicine is becoming more and more of an exact science. I believe that we are slowly but surely approaching the great millennium of medical science, and that some time, perhaps not in the far distant future, we shall reach the goal when medicine will no longer be regarded with uncertainty and its administration attended with doubt and hesitancy, as is sometimes the case, perhaps, at present. The sooner we lay aside all prejudice and make an honest search for truth, the quicker this happy result will be attained.

It is the duty of every doctor to make earnest and patient investigations for himself, and when he finds he has been wrong in his former beliefs, and when he turns the great searchlight of investigation upon his old theories and finds they will not stand the test, but that something else is better, then it is his duty to drop the old and take up the

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new. In other words, it is the duty of the physician to make an earnest endeavor to find out all of the means at his disposal for healing the sick, and when he has found them he should not hesitate to use them in the way which to him would seem most effectual. While I am a great believer in drugs and nearly always employ them, I am convinced that there are other most potent influences that can be brought to bear upon patients, and which in a great many cases really do more in exterminating disease and putting them on their feet again than the mere administration of drugs. One of the greatest weapons we have for combating disease is suggestion. And it is one which we all employ more or less, whether we are conscious of it or not. It is not merely drugs that cure every time. But in many instances a great deal is due to the impression made upon the patient by the physician while administering them. Whether the physician was conscious of it or not, he firmly fixed the idea of cure upon his patient's mind, and this mental process acting in harmony with the drugs administered served to give him a speedy recovery.

The doctor who realizes the great power of suggestion and employs it in the most forceful manner will always meet with the greatest success. The mind presides over the body and to a large extent rules and governs it. Hence in treating disease we need a little treatment for the mind as well as for the organs themselves. If we are able to make favorable impressions upon the minds of our patients, and to instill hope and courage in them, to cheer them up and to dispel their fears, we have accomplished a great deal in curing their diseases.

What doctor who has not at times, upon first visiting his patient, found him in perfect agony, but after an examination and a few quiet remarks assuring him that he was in no immediate danger and that he would soon be all right again, seen him grow better and his pains disappear without the administration of a dose of medicine?

This is suggestion or mind treatment. The very presence of the doctor nearly always exercises a beneficial influence on the suffering patient. Confidence in a particular doctor goes a long way. Sometimes a doctor in which the patient has no confidence may have him under treatment without success, but as soon as he employs another in which he has confidence he will begin to improve, though the second doctor may use the same medicines and adopt the same methods of treatment as the first. This is partly auto-suggestion, though it may be strengthened by the deportment of the physician, or by his reassur-

ing words, all of which serve to establish the patient's confidence more firmly.

The flaming advertisements of patent nostrums serve to establish confidence in their efficacy and many times cause them to do good when otherwise they would be perfectly worthless. It might be said that it is the advertisement which cures and not the medicine. It is the suggestion of cure which the advertisement has made on the mind of the patient that does the work. Flour has been known to produce almost the same effect as morphine when accompanied by the proper suggestions. No doubt suggestion plays the larger part in the cures wrought by the homeopaths, for their theory of treatment is irrational in the extreme, and there could be no virtue in the infinitesimal doses which they employ.

Suggestion is the very foundation of Christian Science, Divine Healing, Magnetic Healing, Osteopathy, and all those new-fangled methods of treatment which are so much in vogue in some sections at present, and which we are bound to admit meet with a certain degree of success. Aside from suggestion or the idea of cure which is established in the mind of the patient, they would all be utterly worthless. By means of this and this alone is explained the cures wrought by their methods and the hold they are gaining on the people, for there certainly could be no efficacy in the methods themselves. The sooner we regular physicians come to realize the great power we have in our hands of curing disease by means of suggestion and employ it in every proper and legitimate way to that end, the sooner we will drive the great horde of quacks and humbugs out of the field. It is a duty we owe, not only to ourselves, but to the people whom we serve. The country is now infested with a great army of quacks who are practicing under various names, and who are claiming various systems and theories of treatment, and who are no doubt doing more harm than good. Their success, whatever they may have, is due to suggestion, and as soon as we with our superior knowledge and attainments begin to make helpful suggestions to our patients and inspire them with hope and confidence and the expectation of a cure, where a cure is at all probable, and thereby adopt the only means upon which quacks can subsist, and use them in connection with the vast other resources which we have and which the quacks have not got, then they will have to step down and out.

There are various ways for the physician to make helpful suggestions to his patients, and I am inclined to believe that we make suggestions good or bad upon every patient that we visit. We do this by our deportment if nothing else. The doctor who enters the sick room in a halting, hesitating, uncertain manner and approaches his patient with a long face and a troubled look, as though something dire were about to happen, will never meet with the success in the treatment of his case that will attend his brother practitioner who enters the sick chamber with a firm, steady step, as though he were master of the situation, and approaches his patient with a bright, cheerful countenance and makes his examinations and administers his medicines in a reassuring way that inspires hope and confidence in himself and his remedies. It is our duty by our words and actions to banish fear and dread from the minds of our patients whenever we can. If possible we should always assure them that they are not very sick and that they will get along all right and will soon be well, that the medicines will act well, and in other ways make beneficial suggestions, so as to inspire them with hope and courage. One of the best and most effectual ways of making suggestions is by means of hypnotism. When the patient is fully awake, be the suggestions ever so strong and forcible, there will many times be an element of doubt in his mind which will render the suggestions almost worthless. Then, again, the idea of disease and affliction may have become so deeply rooted in the mind of the patient that with all of his eloquence, and all of the persuasion he can bring to bear, the doctor may not be able to dislodge it. But when the patient is under the hypnotic sleep his power of reasoning is cut off. He is not capable of making logical deductions for himself, consequently there can be no counter-suggestion from the patient to counteract that of the physician. He accepts whatever is told him without dispute or question, and post-hypnotic experiments prove that he will act upon it, though he may be unconscious of it. The deeper the sleep the more valuable the suggestion, for then the idea of cure can be deeply rooted in the mind of the patient and it is more lasting.

Hypnotism, like medicines and other means of treatment, has its sphere of usefulness, but of course is not applicable to every case, though I do not see how it could do any harm in any case if rightly employed. While it is always perfectly harmless if rightly used, and is helpful in a vast number of cases and in some will cure where drugs would utterly fail, still it could be used in the wrong way, and much

harm could no doubt be done with it. But that being the case does not show that the fault is in the method; it is in the man. So far as a great many people are concerned, it is shrouded in mystery. But it is perhaps a very simple process after all. It is the duty of the doctor to investigate its merits and to teach people not to regard it with horror and superstition, as many have done heretofore, but that it is one of the great forces or powers that God has placed in the hands of physicians to be used for their relief and cure. Then its practice should be legally confined to physicians only.

When this is done hypnotism will take its place along with the other great resources which we have for the relief of mankind. In practicing suggestive therapeutics in any way whatsoever, we should study the nature and disposition of our patient.

The doctor should not only be a student of medicine, but of human nature also. He should know how to approach each individual patient and what suggestions to make, and how to make them so as to do the most good. No harm can ever come from suggestions made during the hypnotic sleep or in the waking state, if they are the right kind, and I am glad the profession is realizing the value of suggestive therapeutics and is employing it more and more. In entering upon this new century that which appeals to the truly scientific and earnest investigator with greatest force is the broad and liberal spirit with which men of culture and scientific attainments are willing to penetrate into the realms of the unknown and grapple with the mysterious forces about them. We are rapidly approaching the happy epoch of medical history where physicians are earnestly and conscientiously trying to cure disease, and are willing to utilize any thing and every thing that may enable them to relieve human suffering.

MILLERSTOWN, KY.

HERPES GENITALIS.—(M. Gaucher, Paris, *Independence Med.*, 1899.) According to the author, herpes caused by external irritants must be differentiated from that due to internal neuroses. Herpes following some internal disease may be localized on the genitalia. The common causes are, ordinary coitus, sexual excesses, blenorrhagic or chancroidal discharges of the female genitalia. As a modification the constitutional condition must essentially be considered. A local predisposition due to previous venereal disease of the genitalia need not be considered, since many suffer with herpes who never had any venereal disease. For treatment the author uses starch or talcum and alum mixed together. As a systemic treatment, arsenic and sulphur baths.—*The Medical Fortnightly*.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, December 21, 1900, Louis Frank, M. D., President, in the Chair.

(1) *Extra-uterine Pregnancy (Tubal): Rupture of Tube: Laparotomy; Recovery.* (2) *Hydrosalpinx.* Dr. Turner Anderson, Professor of Gynecology and Obstetrics, Medical Department University of Louisville: The two specimens which I shall present have interested me very much, and as they are of a character well known and understood by the members of this Society, only a brief history of the cases will be given.

Case 1. In April, 1900, I was first consulted by Mrs. S. B., aged thirty-four years, the mother of one child fourteen years of age. Examination revealed a prolapsed ovary and diseased tube, with the history of pelvic pain and menorrhagia, for which she had been under treatment. Operation was advised and declined. This patient was under the care of Dr. Rodinan before he left the city, who treated her for uterine disease. She afterward passed into the hands of some other physicians.

During the last week in September she again called to see me, stating that she felt much improved in health, but that her menstrual period, which was due some time during the first part of September, had not come on. I advised her to return later if she did not do well.

I heard nothing more of the case until she called to see me on the 24th of November. During my absence from the city, two days before this date, she was seized with violent pain in the abdomen of a colicky character, and called in Dr. Cottell. She was well enough the following day to see the doctor at his office. He advised her that she was perhaps pregnant, and also had a tumor. Her condition when I saw her was one of profound anemia, with a very small, thready, and frequent pulse. I learned that from about the middle of October she had been almost constantly in bed, and had been having irregular discharges of blood from the uterus, causing her to suspect a miscarriage. Two days subsequent to my visit on the 24th of November all metrorrhagia had ceased. Examination showed marked enlargement of the uterus and a tumor on the left side.

*Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

Her condition steadily improved from this time until she was removed to the infirmary for operation on December 13th. During this time she was seen by Dr. Roberts, who concurred in the advisability of an operation. On December 13th she was seen by Dr. Ouchterlony, after being moved to the infirmary, who advised operation and suggested the possibility of extra-uterine pregnancy, with rupture as the cause of the patient's profound anemia.

I operated on the 14th of December, and removed the specimen which I exhibit. The development of the uterus was exceptionally great, and its cavity, as will be seen, is very much dilated. It was deemed wise to remove the uterus, which was done in the usual way—an entire cast of decidual membrane came out of its cavity. It will be seen that the umbilical cord is unruptured and the placenta is entire.

The patient has done well since the operation, and is now, a week afterward, convalescent. Her abdomen was opened in the usual way by a median incision. After cutting down to the peritoneum, getting through the sub-peritoneal fat, I noticed that immediately beneath the peritoneum was a quantity of black-looking material resembling bruised muscle. I then went higher up at the upper portion of the incision, where I could outline the peritoneum, and carried my incision downward from that point. I found this black-looking material to be a blood-clot hanging to the parietal peritoneum, an immense clot which had spread out, the result of a hemorrhage. At the bottom of this mass, surrounded by clots, was the ovum. The fetus was probably between three and four months old; its sex (male) can be easily seen. I take it that rupture occurred on November 22d, the date Dr. Cottell saw the patient.

Case 2. This specimen is a hydrosalpinx of the left tube which I had the good fortune to remove without rupture. On the right side there was an intra-ligamentous subserous fibroid tumor, which was also removed.

This case is of interest because I have had the patient under observation for more than fifteen years. She is a woman who has recently become a widow by the death of her husband, and fifteen years ago she became infected; following this she had quite a serious illness lasting for several months, and has been a chronic invalid ever since, but would never consent to an operation until the 7th of this month. I had no difficulty in detecting a mass in the abdomen, and this was about the only diagnosis that could be made. Upon opening the abdo-

men I found I could detach the hydrosalpinx, and the tube and ovary were removed. On the other side I encountered this intra-ligamentous fibroid, the removal of which proved to be quite difficult. I did not perform an hysterectomy in this case, although after the operation was completed I regretted that I had not also removed the uterus.

The patient has gone along without a bad symptom, and her recovery is assured.

Discussion. Dr. J. G. Cecil: Dr. Anderson has made a beautiful exhibit, the specimen of extra-uterine pregnancy being one of unusual interest, being a clear demonstration of what we see in that unfortunate condition. The only point about which I would raise any question is the necessity for doing a complete hysterectomy in a child-bearing woman for extra-uterine pregnancy. I presume, however, that the reasons assigned by Dr. Anderson, being the man on the ground, are sufficient.

Dr. H. A. Cottell: Seven or eight years ago the first case reported by Dr. Anderson consulted me complaining of some uterine trouble. I could not make out very much the matter with her; I treated her for a short time for endometritis, and then lost sight of her. I did not see any thing more of the patient until she sent for me at the time Dr. Anderson speaks of. I found her then suffering with pain, not referable to the pelvic region particularly; there was no indication of hemorrhage at that time; pulse normal. I gave her an hypodermic injection of morphine. She came to my office the next day, when I made an examination and told her I thought she was pregnant; that she had an enlarged uterus and a tumor. Dr. Anderson meantime returned, and that was the last I saw of the patient.

Dr. A. M. Cartledge: I am particularly interested in one feature, and that is the decidual membrane which was still present in this case. It has been my experience that the time this is expelled is so variable that it is not of very much importance as a diagnostic symptom. I have one passed three days ago, almost a complete cast of the uterus. Here is a case where the membrane was still present at a very late date. We are generally taught that it is extruded about the second month in most cases, but it may be later. Most of those I have seen have occurred after the operation. I have seen two such cases this year.

Dr. Louis Frank: A word in regard to the case of extra-uterine pregnancy: It is rather unusual that a case of extra-uterine pregnancy

should go as long as this without rupture; I take it that impregnation probably occurred near the distal end of the tube, and we had here, as we find in most of these cases, a tubal abortion rather than a rupture of the tube itself.

Bearing upon the point of hysterectomy in this case, I think there are cases where we can not get along without it. The last case of extra-uterine pregnancy upon which I operated should, I believe, have had this operation done as the operation of choice. The patient had been bleeding, rupture took place early, there was not complete separation of the placenta, allowing constant hemorrhage, with the changes in the condition of the broad ligament and about the tubal structures that Dr. Anderson has described, namely, a marked friability of the entire structures, preventing the ligatures from holding as they should. She was profoundly anemic when operated upon; but I believe in such a case hysterectomy, if carried out properly, beginning on the sound side before attempting to enucleate the fetus with the blood-clots and placental remains, would be a better operation than removing these, as was done in my case, and trying to leave the uterus behind. So we may meet with instances where this operation should be done. It is probable if hysterectomy were done primarily in more cases of this kind patients might be saved that are otherwise lost.

The other specimen is also interesting, and I think the doctor is to be congratulated upon removing it without rupture.

Hemorrhagic Glaucoma. Dr. J. M. Ray: This specimen represents the two halves of an eye that I removed last Monday. The case has some points of particular interest. I first saw the patient three weeks ago; he came to my office one Sunday morning, sent by Dr. Hancock, of Jeffersonville, Ind. The history was that in May or June of this year he commenced to lose the sight of his right eye. There was a blurring of every thing, and in the course of a month or so he became perfectly blind in that eye. This went along without any discomfort until ten days before I saw him, when he commenced to have pain in that eye. He consulted Dr. Hancock, who gave him something for the pain, which afforded some relief.

When I saw the patient he was suffering from an acute glaucoma. The eye was perfectly blind, there was not even a perception of light, but the other eye was perfectly normal in every respect, vision $\frac{20}{20}$, the field was good, and it did not have the so-called glaucomatous expression.

I put the man on eserine, and gave him a coal-tar preparation to allay his pain. He came back in a few days with an eye about as hard as I ever saw; the tension was at least +3, and he was suffering a great deal of pain. I wrote a note to his doctor, and received a reply saying the man was suffering from Bright's disease.

I tried to allay the tension by myotics, and administered salicylate of soda internally, being rather chary about the use of morphine. Pain in the eye increased, the hardness remained, and the case reached a point where something must be done to allay the man's pain. When I first saw him the cornea and lens were transparent, but the vitreous was so murky it was impossible to get a view of the fundus. Later on this prolonged tension produced a steaminess of the cornea and lens so that even at the time of the operation the iris was hidden.

The diagnosis to me was interesting—exactly what it was. It lay between hemorrhagic glaucoma and a growth in the eye. The slow development of blindness, dating from last June, and the character of the blindness were a little suggestive of a growth. The man was forty-three years of age. When this steaminess covering the eye appeared, then I was rather inclined to think it was a case of hemorrhagic glaucoma. The choice of operation lay between enucleation of the eye and iridectomy. The eye was blind, and while the urine showed one half of one per cent of albumen, with a low specific gravity and casts, I thought the best thing to do to relieve the man's pain was to enucleate the eye. This was done last Monday.

The interesting feature about the case is that in five minutes after enucleation of the eye all steaminess of the cornea had disappeared. The only thing remaining was a little albuminous exudate over the surface of the iris, and with the ophthalmoscope we could examine the inside of the eye. This same exudate covered the fundus, so it was impossible to see the condition you see in the specimen.

There was a great deal of hemorrhage following the enucleation, and the socket bled all that night, and the next morning the lid was puffed out by a large hemorrhage filling the orbit. I applied a compress bandage. This large clot has broken down, and the man has suppuration of the cellular tissue of the orbit. He was anemic and showed the ravages of Bright's disease at the time of the operation.

It is a fine specimen of acute neuro-retinitis with hemorrhages distributed all over the fundus; you can see the swollen nerve head and hemorrhages distributed over the entire retina.

Discussion. Dr. T. C. Evans: I had the opportunity of examining this eye directly after enucleation, and was surprised to see how the cornea had cleared up. With the ophthalmoscope the eye appeared almost normal after removal.

In this connection I noticed in a medical journal to-day a short article by some French surgeon, in which he called attention to the fact that the hemorrhagic form of retinitis that follows in the course of albuminuria is particularly liable to be followed by glaucoma.

Dr. S. G. Dabney: The case reported is interesting from the fact that it went along for six or seven months without pain, and then suddenly had this exacerbation. It would have been desirable if Dr. Ray could have seen the patient before atropine was put in the eye. This is a very natural step, however, and it is not probable that the glaucomatous symptoms were brought on by the use of the atropine, although probably exaggerated by it. The probability is that it was a case of hemorrhage preceding the tension, a case of hemorrhagic glaucoma, tension coming on secondarily. The consensus of opinion is that iridectomy is useless in these cases; enucleation is the only thing to do.

In this case it was very natural to suspect an intra-ocular tumor; the man's age, the fact that he had become gradually blind, then the attack of glaucoma, would suggest such a diagnosis. As haziness of the eye prevented examination, this could not be positively excluded. Bright's disease was one thing which pointed to a hemorrhagic condition.

Gall-Stones. Dr. A. M. Cartledge: Some eight weeks ago these calculi were removed from a woman thirty-five years of age, and it presents an entirely new feature to me in gall-bladder surgery, and may throw some light upon some of the cases that from time to time have been reported, and the method of procedure in these cases also; the case is more or less unique, as far as I am aware.

This woman presented the usual and familiar symptoms; great enlargement of the gall-bladder from cystic duct obstruction; there was history of liver trouble; finally the development of a tumor in the usual site of the gall-bladder, pain, fever, etc. At the time of the operation the gall-bladder was greatly distended and very much thickened in its walls, not of very good color, though the circulation near the neck of the gall-bladder seemed to be better than at the distal portion about

the fundus. One or two points on the anterior surface were more or less sphacelous. It was one of those cases where after removing a calculus you feel tempted to do a cholecystectomy. The lymph that was thrown out over the gall-bladder and the attachments about the neck to the liver were very great. It has been my experience in breaking up attachments to the liver in these cases you get considerable hemorrhage.

This gall-bladder was opened at the usual site in the fundus and over three hundred calculi washed out, the deepest of which obstructed the cystic duct; the gall-bladder was nearly the size of a fetal head. Finally the duct was cleared, as demonstrated by passing the hand outside of the gall-bladder and feeling the junction between the cystic and the common duct. I was then about to conclude that all the stones had been washed out, but up in the fundus of the gall-bladder could still be felt something hard. Irrigation was again resorted to, but nothing came out.

Now comes the unique feature in the case: This gall-bladder has a partition in it; there was a second sac which contained probably fifty small calculi. Perhaps three hundred calculi were washed out of the main part of the gall-bladder before this second compartment was discovered, yet here was a second sac of stones which, on account of the thickened condition of the gall-bladder walls, might have been entirely overlooked. This fact might explain some of the cases operated upon where you think you have removed all of the stones, yet some calculi later pass out through the opening.

I have had a great number of these greatly distended gall-bladders, more or less diseased, chronically inflamed, thickened, some of them very thin, where drainage was unsatisfactory and continued for a long time; a tube was put in, yet the gall-bladder was a long time getting back to any thing like normal in size. Some writers advise that in such cases as this a cholecystectomy had better be done. The gall-bladder is like the intestine, it may look gangrenous, but if resection is properly done, it will heal kindly. In this case I resected the gall-bladder, which I found to be a very easy operation. I took out about half the gall-bladder, and then sutured it to the abdominal wall. In cases where the gall-bladder is very much enlarged and redundant, much better results can be obtained by resection. The fistula in this case was only in existence for two or three weeks. Usually it is many weeks before healing takes place.

I have operated upon two cases in gall-bladder surgery since where there was much enlargement, but the condition was not as bad as in the case reported, and I did not consider resection necessary. This is the first time that I have resected the gall-bladder in a case of this kind.

Case 2. Another specimen I simply show in this connection, a very large biliary calculus, which I removed from a woman sixty-two years of age. This woman has been an invalid for sixteen years with "stomach trouble." She was never jaundiced, has never had a tumor so far as known, and there has been no history of gall-stones. Her only symptom was pain in the epigastric region. Latterly there has been loss of flesh, which led her physician to believe she had cancer. She was subject to "itching spells," which led me to believe she had a mild form of jaundice.

I made an exploration and found the gall-bladder just the size of this large gall-stone; it had contracted on this calculus. There was considerable difficulty in removing the stone on account of the adhesions which had taken place.

This case illustrates a phase of gall-stone trouble; no jaundice, no enlargement, yet here is a very large stone with a contracted gall-bladder.

Discussion. Dr. Turner Anderson: It seems to me that the only explanation of this partition in the gall-bladder is that the larger stone became encysted, and by inflammatory processes it was walled off.

Dr. H. A. Cottell: I am inclined to agree with Dr. Cartledge that this is a congenital partition, though Dr. Anderson's explanation is not improbable. I have seen a good many gall-bladders in the dead-room in former years, but never met with an anomaly of this kind, nor do I remember to have read of one.

In lieu of a written paper, the following report was made by Dr. H. A. Cottell:

Two Cases Without Diagnosis. About four years ago, holiday-time, Dr. Turner Anderson rode by my office and left the number and name of a patient; my wife happened to answer the door-bell, and he told her to send me around, when I came home, to see a sick girl on Eighth Street, and to please tell him what was the matter with her. I went, and found the doctor had sent me to see a very interesting and what

I considered an anomalous case. A young girl, perhaps nineteen years of age, had been attending a series of revival meetings, and it was stated that she had been under considerable religious excitement. At the time I saw her she had high fever and a history of internal hemorrhage. She had vomited blood several times, and I believe she had also purged blood. She had the rapid, feeble pulse of a person who had had a severe hemorrhage. I believe Dr. Anderson did not see the case again until convalescence was established. He had prescribed digitalis, and I went on with the case.

The woman was confined to her bed at least a week, and then got up in a weakened, anemic condition, which slowly yielded to hemato-poietics, iron, etc. I remember one feature in the case particularly, that she had a decided anemic murmur; she never developed valvular lesion of the heart.

I would not have reported this case, perhaps, if it had not been that last October, one Sunday morning, I was called to see a case reminding me of the one reported. The patient was a young lady, aged about twenty-five years. She was lying in bed, almost in collapse. I put my finger upon the radial artery and found a very rapid, feeble pulse, and I noticed that the woman was very much blanched. I listened for heart trouble, but could hear no abnormal sounds; the heart was very weak. I turned around to ask some questions, and was told that she had been passing something very peculiar when her bowels moved, a black, curious-looking material. She had saved some of the stool, which was clearly a hemorrhage from the bowel.

I prescribed digitalis at that time, and was called back that evening, because she had vomited a considerable quantity of blood. The next day she was practically in collapse. They sent for me to come down hurriedly in the afternoon, and I found the priest there administering extreme unction; the neighbors had come in, and all expected her to die. She had had another hemorrhage.

In this case there was no elevation of temperature; the girl had been perfectly well before. She made a recovery very much like the other patient, except that it was somewhat slower. I looked after her for perhaps two weeks; she gradually, under ferruginous tonics and reconstructives, got about the house, and I saw no more of her until a few days ago, when she walked into my office and reminded me of her case. I then examined her heart very carefully but could detect nothing wrong.

I leave these two cases with you; I made no diagnosis except gastro-intestinal hemorrhage. What is the etiology of such cases? The patients are both well to-day.

Discussion. Dr. A. M. Cartledge: Owing to the fact that both these patients were females, and with the well-known often obscure symptoms of gastric ulcer, I would be inclined to think this was the trouble in each instance. Dr. Cottell did not see either case until hemorrhage occurred. I think they were both cases of gastric ulcer with hemorrhage. I have only seen three or four cases where I thought the trouble was gastric ulcer. In two of them I have every reason to believe a gastric ulcer existed; one has since died of perforation. All these cases were women, and outside of anemia, a peculiar discomfort about the stomach, indigestion, etc., were about all the symptoms that could be obtained. No great nausea ever attended any of them. Consequently, Dr. Cottell's cases, both being in females, I would suspect gastric ulcer. We can rule out typhoid fever. The fact that blood was vomited shows that the lesion was high up in the alimentary canal. This would make the diagnosis, almost by exclusion, that of gastric ulcer.

Dr. T. H. Baker: Dr. Cottell did not say any thing about the menses in the cases reported. It seems to me the whole matter might be explained upon the theory of vicarious menstruation. Both occurred in females, and the doctor was entirely silent as regards their menstrual periods. I offer this as a possible explanation of the hemorrhage.

Dr. J. G. Cecil: I am inclined to take the same view of the cases reported by Dr. Cottell as expressed by Dr. Cartledge; to me this is the most reasonable and most probable explanation. In the first place, the ages of the patients are such that we can exclude hematemesis from almost any other cause, except such cases as would be very easily made out, and the history of any other cause would perhaps be very plain. As we know, women vomit blood from a great many different causes, but most of the causes are of a chronic kind, that is, due to chronic diseases, and are seen in persons who are older, notably in liver troubles, chronic heart diseases with extreme congestions, excessive congestions about the stomach, etc.; but in young women who, as we know, are especially prone to neurotic tendencies, chlorosis, and anemia, though there be not the history that we frequently get of gastric ulcer, it seems to me that would be the most reasonable diagnosis.

I remember a case of my own which I can briefly relate, and which in many respects corresponds to the observations made by Dr. Cottell. The patient was a young woman eighteen years of age. In this case, however, there was a previous history of the vomiting of blood, which made the diagnosis almost certain. She had vomited blood in considerable quantities, but not to the extent reported by Dr. Cottell. This young woman recovered under the ordinary treatment of diet and such medication as is usually given for checking hemorrhage and for building up the patient. She has passed out of my observation, and I do not know that there has ever been a return.

I do not see how else you can explain these two cases, with the uncertain developments and uncertain line of symptoms which seem characteristic of gastric ulcer, many cases going on to perforation and death without any symptoms; it merely means that the ulcer does not occur over a vessel large enough to amount to a hemorrhage. As we know, too, gastric ulcers perforate and the patients die from peritonitis, or they may produce a sub-phrenic abscess or other conditions in that region which are not diagnosed until a post-mortem is made.

We do not always get a clear, plain history of gastric ulcer. So getting at it by exclusion, by the progress of these cases, each patient recovering without the development of other conditions or diseases to explain the symptoms, gastric ulcer would be the most probable diagnosis.

Dr. Turner Anderson: I remember the first case very well, and asked Dr. Cottell to make the visit, because I felt somewhat at a loss to know what was the matter with the woman. There was a peculiar feature about the case—something I have never seen since and had never seen before. She was a woman that was ill; any one with experience would have at once recognized how sick she was. She had a history of having been very much interested in religious meetings that were going on at the time, and she was simply seized with vomiting of blood, with rapid pulse, and the passage of blood from the bowels. No information could be obtained which would lead one to suspect that it was vicarious menstruation. I saw her a few times only and then turned the case over to Dr. Cottell, but I did not suspect the possibility of gastric ulcer. Her previous state of good health, the fact that she had manifested no digestive disturbances, that there had been nothing to lead me to suppose that she had any stomach trouble, it did not occur to me that the hemorrhage could have been the result of a gastric ulcer,

though I am aware that cases have been reported before this Society where perforation had taken place and the patient died suddenly. If there is such a thing as functional hemorrhage from the bowels or stomach, it impressed me that this was one of those cases in which there was an active hyperemia of the gastric and intestinal mucous membrane with hemorrhage, and I do not know but this was the explanation of it. This hemorrhage had gone beyond the ordinary limits, had transcended those lines, and had become pathological. That was the impression I had of the case. I think Dr. Roberts can tell us something about a case of appendicitis with active hemorrhage from the bowel.

Dr. W. O. Roberts: The case referred to by Dr. Anderson was a young man from Princeton, Ky. I was called to see him on Thanksgiving day. The history of the case, as related by the doctor, was that in February he had an attack supposed to be appendicitis; he was laid up for a week or ten days; that for some months after this attack he had an uncomfortable, weighty sensation in the right inguinal region. Sunday of the week before I saw him he was taken with an attack similar to the one he had in February; he was laid up three days with this, and then returned to work but did not feel well. On Monday before I saw him he was seized with most intense pain in the right inguinal region, and another doctor was called in to see him; the pain was so severe that the doctor told me he had to give him during the afternoon one and a half grains of morphine before he became quiet, and after that he gave him purgatives in the form of calomel, and the aloin, belladonna, and strychnine pills; that he had a passage from his bowels on Wednesday which contained some blood. He then gave him a bottle of citrate of magnesia.

I saw him at four o'clock Thursday morning; he had passed a small action stained with blood. I saw him again between nine and ten o'clock that morning, and he had three actions, which were shown me, and they looked exactly like a hemorrhage from typhoid fever. I suppose there was about a quart of very black, clotted blood; his temperature from Monday to Wednesday had varied from 101° F. to 103° F. When I saw him the temperature was 101° F., and his pulse was exceptionally good. It looked to me like I had to deal with a case of appendicitis associated with typhoid fever. His surroundings were not favorable; he was living in bachelor quarters in a room over a store. I concluded the best thing to do was to bring him to Louisville. This was done. He felt during the trip as if he was going to have an action

from the bowels, but was able to control it. He left Princeton at twelve o'clock and reached Louisville at eleven. After he was put to bed he still felt uncomfortable about the bowels, and I had an enema of plain water given him, which brought away quite a large quantity of blood which had evidently been out of the vessels for some time; I then put him on ammonium-ferric-alum preparation; the next evening I gave him another enema, and the resulting stool was still filled with dark blood, but no clots. The next day he had another action, and by this time the blood had ceased. He had all the evidences of appendicitis; he had resistance on that side; dullness and every thing to indicate an inflammatory condition. We waited until after this had subsided, and I then did a laparotomy; found that the appendix had sloughed off, there were extensive adhesions of the cecum, and the omentum was bound down over it.

This is the only case of appendicitis I have seen in which there was hemorrhage from the bowel.

Dr. Louis Frank: I think in all probability in Dr. Roberts' case hemorrhage took place from the appendiceal vessel, and bleeding continued until the opening was closed by inflammatory products, then hemorrhage ceased. The case, however, is a very unusual one.

Referring to the cases reported by Dr. Cottell: It strikes me, as Drs. Cartledge and Cecil have said, these were evidently cases of gastric ulcer. I do not see how we could have had the hemorrhage mentioned from any other cause. I hardly think the explanation of functional bleeding due to hyperemia would hold in these cases. If there had been such a condition, there would have been bleeding from other mucous membranes. The history of these cases bears out very well what we know is true in many cases of gastric ulcer; such as the case mentioned by Dr. Cecil where perforation occurs without any apparent symptoms preceding the perforation.

I have seen one case of gastric bleeding which in many respects presented symptoms like those detailed by Dr. Cottell. The patient was a young woman, aged twenty-four years, apparently robust and in good general health. I was sent for because the girl had vomited considerable blood, there having evidently been a gastric hemorrhage. She was very faint, pulse feeble, and she had vomited about half a washbowl full of blood. She had an attack of vomiting while I was there, and considerable blood, partly coagulated and partly fluid, was thrown off. She afterward passed blood by the bowel.

Two or three gentlemen saw this case and looked upon it as one of gastric ulcer with hemorrhage therefrom. She was put upon the treatment usually followed in such cases, and one of the gentlemen who saw the case with me was sent for several times afterward, and the case corresponded in subsequent history to that which we have been taught to expect in these cases. The patient ultimately recovered completely, and has since had no trouble; has apparently been in perfect health ever since.

Dr. H. A. Cottell: I am glad that the report of these cases has called forth such an interesting discussion. I am inclined to agree with Dr. Cartledge that the second case was likely one of gastric ulcer, although I did not suspect it at the time. I saw the woman after there had been considerable hemorrhage. All the symptoms of hemorrhage were present. Hemorrhage was soon gotten under control, and she recovered rapidly, barring the fact that she was anemic for some time.

As to the first case reported, I would be a little slow to allow that this was a case of gastric ulcer. I did not make any inquiry as to the menstrual function in this case. I have never seen a case of vicarious menstruation which amounted to any thing. I have known some women to cough up a mouthful of blood at the time they should have menstruated, but this is about all. I am not prepared to look for any such large hemorrhage as we had in this case as the result of vicarious menstruation. The great point involved is this, whether we can have excessive hemorrhage from the stomach and bowel without lesion, granting, of course, that there is no mechanical resistance to the return of the blood, that the heart is in good order and the liver not obstructed. In thinking over the matter since the discussion started, it occurs to me that in the first case we might have had a condition of things analogous to the condition which produces the black vomit of yellow fever. Black vomit is hemorrhage from the stomach, without any ulceration or opening of the blood-vessels through degenerative changes; but that may be accounted for by the fact that yellow fever overwhelms the liver.

I do not know exactly what Dr. Anderson means by functional hemorrhage. I suppose he means a functional derangement of the blood-vessels. We know that the blood-supply to the alimentary canal is enormous. It is out of all proportion to the blood-supply of any other set of organs. The great vessels, branches of the celiac axis, the superior and inferior mesenteric arteries, etc., pour enormous

quantities of blood into the vessels which go to the stomach, spleen, liver, duodenum, and on down to the rectum. And it is possible to bleed an animal to death into his own vessels by tying the portal vein and preventing the return of blood through the liver.

We know that there is a cardio-depressor nerve; that nerve is connected with the cerebral mechanism in such way that it acts through the sympathetic system, and its function is to inhibit muscular action of the circular fibers of the small vessels in the distribution I have spoken of. And possibly a congestion, not exactly physiological, but very intense in character, might be set up, which would result in hemorrhage. But I am branching off into theoretical problems, and will desist.

Report of an Interesting Case. Dr. H. H. Grant: I saw, in consultation on Tuesday of this week, a gentleman seventy-one years of age, who was of rather a nervous organism, not very strong, but had always been a temperate man. I received the history that on Saturday night he had eaten not very heartily of an ordinary supper, and was taken with pain, some hours afterward, in the stomach, and was seen during the night by the attending physician, who found he had vomited a little and had some pain in his stomach, and his bowels had not moved. He was given a saline purgative, but vomited it; pain continued, and the doctor thought it advisable to administer morphine for its quieting effect. Sunday morning he was somewhat better; his pulse at that time was 80, he was still nauseated, and suffered more or less pain during the day. The purgative was repeated by the mouth, but no result was obtained, and Sunday evening he received an injection by the bowel, which was responded to by a small action. The pulse all during this time was not strong; pain was moderate in character, and there was no distinct vomiting.

On Monday morning he vomited a little; seemed to regurgitate rather than vomit it, the substance being of a dark color; pain continued, not very severe at any time, but enough to make it wise to repeat the morphine. No response was obtained to purgatives, which were rejected in saline form, and no other purgative was given.

On Tuesday morning his pulse was more feeble, the pain of which he complained was nothing like so severe, but his bowels had not acted, even up to this time, except in response to the enema. On the afternoon of Tuesday he was seen by the family physician; his pulse was

90, was in his judgment quite feeble, and his condition made him anxious. The patient was regurgitating at this time a small amount of dark-colored fluid, which was slightly stained with a rusty color, rather a prune-juice color; it might have been blood, but very small in amount. He had no cough and no pain in the chest, and when I saw him at 9 o'clock on Tuesday night he complained, as he had done during the entire time, of some pain in his hip, with no distinct pain in his stomach, no cough whatever, respiration slightly exaggerated. A respiratory murmur could be distinctly heard; no evidence of rale or dullness; the heart sounds were so feeble that I could not hear them; pulse 110 and exceedingly feeble. He was perfectly rational, absolutely at himself in every respect, and did not appear to be much sick as far as his intelligence was concerned, and his chief complaint was weakness and a constant disposition to regurgitate fluids and the nausea that attended it.

When I saw him I advised that strychnine be given and pushed in 1-30th grain doses every four hours, and that large doses of bismuth be given—15 grains bismuth and 15 grains bicarbonate of soda every four hours. I suggested to the physician who was in attendance that the condition was very much like that of ptomaine poisoning, and it seemed to me that he must have eaten something that had gradually produced these symptoms, and owing to his age and feeble condition it might be impossible for him to respond. Calomel was not given on account of his condition.

I saw him the next morning at nine o'clock, and he was then absolutely pulseless; the heart sounds could not be heard. He appeared perfectly conscious, his body was warm, he was entirely rational, and it did not really seem that the man was practically dead at that time. He died one and a half hours afterward, and presented no other symptoms except those I have just described. He did not feel any more pain, and did not regurgitate any more fluid to amount to any thing after he took the bismuth and soda. His weakness continued during the night without chill or pain more than an occasional feeling of distress in the stomach, and the sciatic pain for which the morphine had been administered; he practically had no other complaint except nausea and regurgitation of dark-colored fluid, which continued until bismuth and soda were given, then perhaps only stopped because he was too feeble to spit it up. He had no

elevation of temperature, with a constantly progressing feebleness of pulse, 110 Tuesday night and imperceptible Wednesday morning.

The case presented no other explanation to me except that there must have been absorption of poison of some kind. The man, as far as I know, had no organic disease of the stomach, heart or kidneys. The kidneys were sound, I am sure, because I had occasion some months ago to examine his urine. He had a hydrocele, which was tapped, and examination of his urine was made at that time.

The case was a surprise to me in many respects, and I would like to hear what suggestions the gentlemen present have to make.

Discussion. Dr. H. A. Cottell: A few years ago with Dr. Anderson I attended some of the guests of the memorable Herr-Snook wedding tragedy. Two elderly persons were under our care, and the diagnosis of the cases, confirmed by the chemist, was poisoning by some of the bi-products of fermentation. One physician in this city, who was then a member of this Society, claimed to have found arsenic in the vomited material and wrote an exhaustive paper on the subject. I never saw a case of ptomaine poisoning unless these were of that character. Our patients seemed to vomit themselves to death. The pulse was good in both cases to start out with. It came on much like cholera morbus. The patients purged and vomited, then went into collapse and died.

Dr. Turner Anderson: I regard all the cases like that reported by Dr. Grant as cardiac asthenia. I am afraid of opium in old people. I have had some surprises in my experience in this respect, and while I do not believe in this case opium contributed to the fatal result, I still wish to state that I am afraid of any of the preparations of opium in old people.

B. A. ALLAN, M. D., *Secretary.*

PROCEEDINGS OF THE MULDRAUGH HILL MEDICAL SOCIETY.

Meeting at Elizabethtown, Ky., December 13, 1900.

The Muldraugh Hill Medical Society met at Elizabethtown, December 13, 1900. The Society was called to order by the President, and the minutes of the previous meeting were read and approved.

After disposing of the regular business, Dr. Jerome Smith, of Hodgenville, presented a case of osteomyelitis that had been before the Society at the last meeting. Since that time the humerus had been removed down almost to the elbow-joint. A good recovery had

been made, but within the last few weeks the remaining portion of the humerus has become involved and a second operation will be necessary. The patient has improved very materially in his general health and appearance.

The Committee on Credentials reported favorably on Drs. T. J. Poteet and J. R. Cooper for membership, and they were duly elected.

The President and Secretary were instructed to give Dr. P. C. Sutcliff a certificate of membership, so that he might present it to the National Association for membership in that body.

Drs. Aud and Gaddie were appointed a Committee on Necrology. Dr. Aud reported the death of Dr. S. J. Willett, of Stephensburg.

Dr. Prewitt, of West Point, reported a case of tuberculosis of the wrist-joint following an injury. The patient was a lady, twenty-seven years of age, with a tuberculous history coming from her father's side of the family. The joint was opened and curetted, and a good and rapid recovery followed. Dr. Prewitt said that it was interesting to know that the ankle- and elbow-joints became affected and other portions of the body escaped, and that tuberculous disease of the joints usually appears after some slight injury to the parts.

Dr. Gaddie said that these joints being used more than other joints of the body made them more liable to injury, hence more liable to tuberculous disease.

In reply to a question as to how the disease became located at these particular points, Dr. Coomes said that it was carried to the parts through the blood and lymph channels.

Dr. Aud said that the material for repair of the injured joint served as a nidus for the tubercle bacilli.

Dr. S. Smith, of Hodgenville, exhibited a case of osteomyelitis which had been exhibited at the last meeting of the Society. The greater part of the humerus had been removed, enough of the periosteum being left for reproduction of the bone. Repair had gone on very rapidly, and the patient was much improved in every way. The elbow-joint had recently began to swell, showing that further operative procedure would be necessary to completely eradicate the disease.

Dr. Gaddie reported a case of osteomyelitis in a child three years of age; had given the supportives internally, but had not used any surgical means. It was the consensus of opinion of those present that Dr. Gaddie's case could be materially benefited by the use of permanent dressing.

Dr. Walton said that in the treatment of whooping-cough with belladonna, the important point in the management of these cases was to keep the child on the verge of atropinism; in short, to keep it on the verge of belladonna poisoning—give the drug until the pupils were dilated, and then keep the patient sufficiently under the drug to maintain dilated pupils.

Dr. Gaddie had secured great benefit from the inhalation of creosote. The development of the creosote fumes or vapor was most readily obtained by putting water into a tin bucket and suspending it in the room occupied by the children. Place a lighted lamp under the creosotized water, and regulate the flame so as to keep the water constantly giving off the vapor.

Dr. Maupin had witnessed an epidemic of whooping-cough. He thought that the germs collected in the tonsils. He insufflated quinine and boracic acid into the throat, and used carbolic acid and eucalyptol oil in form of vapor.

Dr. R. C. McChord read a paper on "Injuries on the Scalp," and reported a case, which brought about an active discussion.

Dr. T. B. Greenley, of Meadow Lawn, read a paper concerning three cases out of the usual order.

CANCER OF THE STOMACH, WITH RAPID COURSE.—Lissau (*Prager medicinische Wochenschrift*, 1900, No. 25) reports the case of a man, aged twenty-eight years, who for three weeks complained of severe pain in the sacral region, paroxysmal, and increased by motion. Aside from slight elevation of temperature and tenderness to the left of the first lumbar spine, physical examination was negative. There was improvement, so that the patient was discharged, but in three days complained of the same symptoms as before, with a feeling of pressure under the right costal margin and loss of appetite. There was slight icterus, tenderness in the right hypochondrium and to the left of the lumbar vertebræ. In the next few days the icterus increased, the stools became clay colored; restlessness and emaciation were noted. By the end of the week there was severe icterus, with bloody stools, hematemesis, great prostration, and frequent pulse, and in two days more death ensued. The autopsy revealed cancer of the stomach, with metastases in the liver, pancreas, and lymph-glands, and compression of the common duct. Details of the size and position of the primary growths are not given.—*American Journal of Medical Sciences.*

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THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES, STATE BOARDS OF HEALTH, AND STATE BOARDS OF EXAMINATION AND REGISTRATION.

If we are correctly informed, the Association of American Medical Colleges has assumed that it can not in any sense regulate the amount charged or collected from medical students as tuition by medical colleges. If this assumption be correct, then something should be done by State legislation to correct this evil that is destroying the dignity and the honor of medical education.

We will grant that the Association can not and should not attempt to regulate the amount a medical college charges for tuition, but it is ridiculous to claim that it can not require a college to collect the amount named for tuition in the annual catalogue. Medical colleges advertise a schedule of fees in conformity with the best and most reputable colleges, so as to place themselves before the medical profession and before State Boards of Health and State Examining Boards as high-grade schools, and then clandestinely and promiscuously distribute free scholarships into all sections of the country by mailing them to Congressmen, Senators, Governors, members of the Legislature, school teachers of every grade, etc., and write letters to students agreeing to admit them upon any terms named. This has become so universal that fifty per cent of the letters written to medical colleges in

the South make this inquiry: "Give me your best terms; I have been offered reductions by other colleges."

As an example of the kind of letters that are written by some so-called medical colleges, the following is extracted from one written to a medical student who had attended three courses of lectures, and was eligible for admission to the Senior year, and in every way able to pay his fees:

"We feel justified in saying to you that we have the best equipped school in the United States, and that we are doing the best work. Your fees will be, matriculation, \$5.00; graduation, \$30.00."

This school only came into existence recently, but its letterhead would indicate that it is over one hundred years old; and if its equipments are the best in the United States, then the facilities for teaching in the various medical colleges must indeed be deplorable.

Were these schools to advertise in their catalogues the amount they are now collecting from medical students, no man who has any concern for his reputation would attend them; but having put themselves in their catalogues before the medical profession as in every way high-toned and reputable, each student believes that he is especially privileged, and that other students are paying full fees. We believe that the medical profession and the medical press appreciate in but a limited degree the extent to which these fraudulent practices are carried or the evil results; otherwise such schools could not be permitted to exist.

If the Association of American Medical Colleges and State Boards of Health and State Examining Boards would refuse to recognize as reputable any school that deviates in the least degree in the collection of tuition from advertised requirements in the catalogue, then the disgrace that we are now compelled to endure would be mainly removed.

Let each college advertise any amount for tuition that it prefers, but compel it to collect that amount universally.

We are pleased to learn from the Dean of the Kentucky School of Medicine that it is his purpose to insist at the next meeting of the Association of American Medical Colleges upon the adoption of a requirement that no school can remain a member of the Association or be admitted to membership that does not conform literally to the requirements named in its catalogue in relation to the amount of tuition charged students. We hope the other colleges of the Association will consider this question and instruct their representatives to sustain this laudable effort.

Current Surgical and Medical Selections.

TREATMENT OF FRACTURES OF THE FEMUR IN CHILDREN.—H. R. Wharton (*The Therapeutic Gazette*, Vol. xxiv., No. 5.) The deformity is usually less marked than in adults, and if present is more easily corrected. The line of the fracture is usually more or less transverse.

Fractures in this class of patients are also often incomplete, certain fibers of the bone giving way while others are only bent, and there is also in many cases a more or less incomplete rupture of the periosteum, which tends to prevent marked displacement of the fragments. The transverse line of fracture, the incomplete division of the fibers of the bone, the incomplete rupture of the periosteum, and the diminished muscular force render the deformity less marked than in adults suffering from similar injuries.

There is a great liability of children suffering with rickets to fracture of the femur.

In the dressing preference is given to the use of a splint of binder's board moulded to fit the leg and thigh, and extending from the sole of the foot to the ribs.

The results are usually satisfactory. The shortening is usually slight, not more than one fourth or three fourths of an inch, and indeed in some cases, especially fractures involving the lower third of the bone, the injured limb by measurement may be found to be slightly longer than the second one. This may be accounted for, according to Verneuil, by increased growth of the injured bone, due to irritation of the lower epiphyses from the traumatism. Angular deformity is usually not present if the deformity was satisfactorily reduced in the early treatment of the case.—*Archives of Pediatrics.*

POST-OPERATIVE TREATMENT.—(*Cleveland Medical Gazette.*) Robb's practice in abdominal operations is to give for the restlessness which occurs for the first twenty-four hours after the operation, when the attentions of the nurse are not sufficient, an enema consisting of two ounces of milk of asafetida, to be repeated in an hour if necessary, sometimes adding one half dram or more of potassium bromid. If the restlessness persists and the patient suffers pain, it may be necessary to give one sixth to one fourth gr. of morphin, but it should never be used unless all other measures have failed. Where the pain is excessive and relief by the simpler methods have failed, a drop of the tincture of capsicum in a teaspoonful of hot water every half hour for two to three doses is ordered, or if this fails, fifteen to twenty drops of deodorized tincture of opium is added to a nutritive enema which the patient receives as a routine practice after the operation. Only exceptionally is morphin given hypodermatically. Strychnin sulphate, one-thirtieth of a grain by the rectum, is given as a routine practice after every abdominal operation, and when the patient arrives in the ward

one-thirtieth grain hypodermatically, with one seventy-fifth grain of atropin sulphate every half hour for two doses. After that she is then given strychnin—one thirtieth to one sixtieth gr.—hypodermatically every three to six hours, according to the character of the pulse, and in a condition of marked shock six to eight doses may be employed. If the pulse is under 110 on the morning after the operation, as a rule, no strychnin is given, but if it is over 120, one fortieth to one seventieth of a grain is given hypodermatically every three or four hours until the pulse is reduced. For the tympanites which sometimes occur after abdominal operation, one to two drops of tincture of capsicum in a teaspoonful of hot water every half hour for three or four doses, or fifteen to twenty drops of essence of peppermint, will often prove effectual. A turpentin stupe or a mustard leaf over the epigastrium is a useful adjuvant. If these measures do not relieve, a rectal tube is introduced high up in the rectum and is allowed to remain from fifteen minutes to half an hour, or until tympany disappears.—*Journal A. M. A.*

THE PRESENT STATUS OF THE TREATMENT OF PROSTATIC HYPERTROPHY IN THE UNITED STATES.—R. Guiteras (New York Med. Journal). The two methods consist of the conservative and the radical. The former consists principally in treating the symptoms and trying to prevent the advance of the disease, while the latter is an operative one, calculated either to remove the prostatic impediment or the entire gland. In treating the symptoms an alkaline should be given for the burning if the urine is acid and there is no cystitis, or benzoate of soda if the urine is acid and the bladder is inflamed. If the urine is alkaline, and a cystitis is present, benzoic acid or, preferably, urotropin should be given. The frequency of urination can be met by belladonna or hyoscyamus. These alone, or with morphin or codein, also quiet pain. The frequency with which the catheter is passed depends upon the amount of residual urine and the degree of desire to urinate that the patient has. Soft rubber catheters, as a rule, are the best ones to use. If cystitis is present, the bladder should be washed out occasionally through the catheter by means of a piston or fountain syringe. The solutions used for this purpose are of boric acid or boroglycerid for frequent washings, and silver nitrate (1 to 3,000) every day or two. There are only two operations in vogue at present for the radical treatment of the hypertrophy, namely, prostatectomy and the Bottini operation. The indications for the two may be briefly summed up as follows: For a prostatectomy, a prostate of large size as felt per rectum, the larger the better, in a patient with healthy kidneys and urine. A Bottini may, however, be performed in almost any case in which the instrument can enter the bladder, and may be of benefit even in marked cases of hypertrophy when an enucleation is clearly indicated, while in many of the cases of small sclerosed prostates with a middle lobe impediment an enucleation could not possibly be accomplished. The technics of both operations are given.—*St. Louis Med. Review.*

Special Notices.

E. N. CAMPBELL, M. D., Good Hope, Ill., says: "I have used Aletris Cordial in threatened miscarriage, and find it one of the finest and most efficient preparations that it has been my privilege to prescribe. Aletris Cordial should be used more than it is, although it is largely prescribed, yet like its twin sister, Celerina, it is not prescribed often enough to prove its efficiency. Most all cases that these preparations are used in are of a chronic type, and those that require patience to relieve; hence, if these two remedies are taken regularly and persistently, according to the case, they will satisfy all concerned."

NOTWITHSTANDING the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine, and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

JUST now it is a matter of common observation that many cases of bronchitis will persist in spite of the continued, varied, and judicious use of expectorants. "The cough," says one prominent physician, "hangs on, harasses the patient with its frequency and severity, and is exceedingly liable to recur every winter—to become a regular 'winter cough'—with its sequelæ of emphysema, asthma, and, ultimately, dilatation of the right heart." Dr. Milner Fothergill, of London, insisted that cough of this character is due to lack of tone, not only in the general system, but in the blood-vessels of the bronchioles. This authority demonstrated that the only successful method of treating this form of cough is by means of appropriate systemic and vascular tonic medication. It is particularly in this class of cases that Gray's Glycerine Tonic Comp. has gained a most enviable reputation. This remedy, which is a most palatable and agreeable one, not only has a selective tonic and anti-phlogistic action upon the respiratory mucous membrane, but it removes the ever-present element of systemic depression. The beneficial effects of Gray's Glycerine Tonic Comp., even in rebellious cases, are invariable and most pronounced.

DR. CYRUS EDSON, of New York Health Department, and Dr. Libermann, Surgeon-General of the French Army, advise special use of hot grogs as adjuvant in the treatment of la grippe. H. Libermann, M. D., Surgeon-General of the French Army, in an article on "La Grippe" (influenza), recommends the following hot grog: "One-third goblet of Vin Mariani with two thirds boiling water; add cloves and cinnamon, and with or without sugar, making a grog of exquisite flavor, which produces immediate beneficial effect in severe cases of cold, attended by convulsive coughing and depression, the principal symptoms of la grippe. It is best taken at bedtime. In the grip epidemics in France Vin Mariani was the tonic absolutely relied upon, and has received frequent deserved mention in the medical press. It has been shown that patients recover very slowly; there is much general weakness and lassitude, invariably calling for something in the nature of a mild tonic stimulant, and it has been found that Mariani Wine is unequalled for such cases." Dr. Cyrus Edson, of the New York Health Department, has made a careful study of the subject in his book on "La Grippe," published by Appleton & Co. On page 39 he writes of Vin Mariani, and calls special attention to it in the form of a hot grog. In speaking of the complete prostration accompanied by the depression caused by this disease, and also during entire convalescence, his preference for a tonic stimulant is a hot grog of Vin Mariani. He says it is excellent for the purpose intended, and recommends its use freely.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNÂ*."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN*.

Original Articles.

CIRCUMCISION.

BY ERNEST G. MARK, A. B., M. D.

It is one of the surprises of progressive hygiene that circumcision has not attained to a much greater rank as a hygienic and social measure, in view of the overwhelming evidence in its favor. Since the introduction of the Abrahamic rite into the Hebraic religious code, some thousands of years ago, its results certainly justify all that has been claimed for it.

To obtain an adequate idea of these results one must, of necessity, obtain his data from a study of the circumcised, and in seeking such data naturally turns to the Jewish race. One of the first things noted to be of consequence is the longevity of the Jews. Dr. Stallard, in his work on "London Pauperism," says that the mortality among Jewish children from one to five years of age is only 10 per cent, while among the Christians it is 14 per cent. The same authority further states that the average duration of life of the Christian in London is thirty-seven years, of the Jew forty-nine years. The statistics of all the other authorities I have consulted make the discrepancy in both the foregoing statements much greater. Dr. Stallard, in the same work mentioned above, states as a result of his investigations that Jewish children are absolutely free from hereditary syphilis. This in itself is sufficient to show the comparative immunity from venereal diseases, and no one will question the statement that syphilis and its congeners are respon-

sible in a great degree for the lessened average duration of life among the Christians, either directly or indirectly.

Certainly no claim for any greater degree of chastity can be made for the Jewish man than for the Gentile. The only ground upon which this comparative immunity is explainable is the fact of the universal practice of circumcision among the Jews, allowing, as it does, of more cleanliness. At the same time the mucous membrane of the glans penis, from which the preputial covering has been removed, is tougher and less liable to abrasions, furnishing a poorer ground for inoculation.

With this freedom from venereal troubles among the Jewish men comes an almost proportionally lessened per cent of pelvic troubles among the women. Unfortunately, I have been unable to compile any reliable statistics on this phase of the subject. When this article was first contemplated I addressed letters to a number of leading gynecologists relative to this. The percentage as stated by these is merely an estimate, although all of those to whom I wrote concurred in the opinion that the percentage was proportionally small.

The nervous manifestations attributable to an elongated prepuce are numerous, and the practitioner who does not examine the condition of the penis of every male child brought to him with a history of nervous irritability has neglected an important point in his diagnosis. It is a sad error on the part of many physicians to consider that a prepuce, no matter how long and redundant, which is not phimosed can not give rise to any important symptoms, a fallacy attested by the following case:

J. A. B., sixteen years of age, was brought to me by his mother with a history of nocturnal incontinence which had persisted since infancy. The usual methods had been tried with absolutely no favorable results. Belladonna had been given to such an extent that the mere mention of the drug caused the boy to whimper. The last physician to whom he had been taken, after exhausting the pharmacopeia without obtaining the desired results, had gravely informed the mother that the incontinence was probable due to inherent meanness, and that if she would duck him in a tub of cold water every time he wet the bed the condition would probably cease to exist. The mother tried this as a *dernier ressort*, and as the boy was passing his water involuntarily on an average of three times a week, the duckings became monotonous.

Upon examination of the penis I found an elongated foreskin, which was retracted without difficulty. History of phimosis during the erect state of the organ was denied.

I advised circumcision, and the operation was performed. Nocturnal incontinence existed for five days after circumcision. On the night of the eighth day he again passed his urine involuntarily. Since then he has had no return of the trouble; nine weeks having passed since the operation was performed.

By far the commoner class of cases are those which present themselves to the physician with a history of nervous irritability. The child is usually poorly nourished. There is a history of night terrors, fretfulness, and attacks of hysterical crying. If the child is of an age to attend school, the parents are prone to attribute the condition to overstudy and harsh discipline. I am convinced that a great number of the cases cited by the critics of the public school system could be traced to a redundant prepuce. I have seen several cases presenting the history outlined above in which the diagnosis of overwork had been made by the parents which were undoubtedly cured by circumcision.

While statistics show that diseases of the nervous system are more common among the Jews than among other religionists, this greater proportion is easily explainable when we take into consideration the fact that the Jews have ever been a commercial race. The country of Prussia has kept for a greater number of years than any other reliable statistics of the different religions in its domains, and M. Legoyt has made an exhaustive analysis of these statistics. The Jews have 57.33 per cent of their population in commerce against 5.17 per cent of the general population, a preponderance of 52.16 per cent. When along with this is considered the fact that the Jews are more given to excesses, the greater proportion of nervous diseases is readily understood.

To return to our statistics, we find that illegitimate births are rare among the Jews, divorces are surprisingly rare, and the Jewish woman who is untrue to her marital vows is indeed an exception. To compare them with their exact opposites in religious teachings, we find that the Jewish women are three times more chaste than their Catholic sisters and four times more so than women of other religious denominations—this statement being made from statistics compiled by the Prussian government. James Parton, the historian, writing on this phase of the subject, says of the Jews: "At the present hour they are probably the chastest seven millions of people under the sun."

While the home and religious teachings undoubtedly have their

weight in influencing toward chastity, these can not be given the whole credit for the chastity of the Jewish women, and certainly not when the great preponderance over other sects is taken into consideration. When considering religious influences, the weight of such influences would most certainly be greater in the Catholic church, having, as it does, such a rigorous discipline, coupled with sacramental auricular confession. Again, with the Jews marriage is a covenant as with the Protestants, and not a sacrament, as with the Catholics. Hence we must look further for an explanation of the exceedingly small number of divorces as compared with the Protestants, and of the remarkable fidelity of the Jewish woman to her marital vows.

To my mind this explanation is not far to seek. The sexual aspect of marital life is by no means a minor consideration. In fact, being desirous of obtaining individual opinions on the subject, I not long ago asked a Protestant minister if he did not believe that sexual affinity was the explanation for at least half the ties binding a happy marriage. His answer I consider rather too large an estimate. It was: "Half? Why, it's at least nine-tenths." However this may be, one thing at least is absolutely certain, and that is: To have a marital state that is tolerable to both the man and the woman, the sexual aspect must be well nigh perfect. To realize this condition, the sexual cravings of both must be satisfied.

It is almost axiomatic that the erotic areas in the female genitalia are not as sensitive as the corresponding parts in the male. Thus it follows that under natural conditions the orgasm in the male is reached before the same phenomenon occurs in the female. The mucous membrane of a glans penis which is kept covered by a redundant prepuce is hypersensitive as compared with the same membrane in a penis from which the prepuce has been removed, and under such a condition the disparity in the time necessary to satisfy the sexual desires is much increased. In the vast majority of these cases the female entering into the act obtains but partial, if any, sexual satisfaction. One of two results inevitably follows: either coitus becomes absolutely repugnant to her, and, resigning herself to a most unhappy fate, she becomes a martyr to the animal desires of an ignorant husband, or she refuses to become such a martyr, with divorce proceedings as an ultimate result, sometimes replete with glaring pictures of infidelity. I do not think the statement exaggerated that at least three fourths of the divorces in which the grounds for seeking separation are incompatibility of temper

or infidelity could be traced to a lack of sexual affinity as a basis. If sexual hygiene were better understood, the etiology of "wifely frigidity" would be stated as "a long and redundant prepuce in the husband, with accompanying hypersensitiveness of the glans penis," and the treatment "circumcision."

Still another advantage of circumcision remains to be stated, though it seems hardly necessary to do so, as it is usually recognized by the profession at large. I refer to the lessened liability to masturbation. A long foreskin is irritating *per se*, as it necessitates more manipulation of the parts in bathing, etc., and it most surely becomes more so when not kept clean of the normal secretions of the parts. This irritation leads the child to handle the parts, and, as a rule, pleasureable sensations are elicited from the extremely sensitive mucous membrane, with resultant manipulation and masturbation. The exposure of the glans penis following circumcision does not admit of an accumulation of secretions and consequent irritations, and at the same time lessens the sensitiveness of the organ. The results are obvious.

The operation of circumcision is too well known to require much comment here. However, when the operator aims to secure good cosmetic effects it is not as simple as is generally taught. The line of union between the skin and pseudo-mucous membrane lining the prepuce following circumcision is sometimes—very often, in fact—marked by nodules somewhat resembling the corunculae myrtiformes. With some attention to the more perfect apposition of the two parts, and a few more sutures, this can be avoided. The frenum should be carefully apposed with the skin on the under surface of the penis first, and then the skin and the pseudo-mucous membrane on the dorsum approximated equally as carefully, the sutures on the sides being placed last, care being taken that there is no eversion of either surface. Sterilized No. 2 catgut forms an efficient suture material. The operation in which the redundant tissue is removed by cutting over the phimosis forceps is in every way preferable; it is quicker, and there is absolutely no danger of injury to the glans penis.

There is rarely if ever any indication calling for circumcision in an infant under three years of age, and the operation is best performed then. The usual method in infants of performing the "dog ear" operation is to be condemned. Local anesthesia under cocain or eucain is to be preferred unless absolutely contra-indicated. The untoward symptoms attributed to cocain by its enemies I have failed to observe,

and, in my opinion, it approaches the ideal in minor surgical work.

There is one addition to the operation which I have employed of late, and for which I had hoped to lay claim to priority, but find that I can not do so. In the ordinary operation the folds which exist on each side of the frenum still remain after the operation has been performed. The removal of a wedge-shaped piece from the frenum obliterates these folds, thus doing away with another lurking-place for infectious organisms. An operation performed as outlined above is complete in every respect, and fulfills all the requirements to its performance.

Recognizing, as we do, the benefits of circumcision, and having heard but one objection to its performance—the declaration of the old Baptist preacher, that “the Lord A’might put it there, and he reckoned he knew his business”—we should use every effort to obtain for it an universal recognition. With the present status of religious dogma, and the eternal war of creed on creed, we can not expect the church to take cognizance of it other than to oppose it. If therefore lies with the physician, the family adviser in affairs hygienic and medical, to urge its acceptance.

KANSAS CITY, MO.

A FEW NOTES ON NASO-PHARYNGEAL DISEASES COMMON TO THE ADULT.*

BY S. G. DABNEY, M. D.

Clinical Lecturer on Diseases of the Eye, Ear, Nose, and Throat in Hospital College of Medicine, Louisville, Ky.

Among the symptoms which are common to the ordinary affections of the naso-pharynx, and which may exist either singly or in various combinations, are the following:

1. *Oversecretion of Mucus.* This is not only a cause of frequent hawking and expectoration, but, trickling down the throat, it may give rise to cough, and when swallowed may disturb the stomach. It is often caused by a shrunken adenoid growth, the sequel of this disease of childhood which has either been neglected or imperfectly removed. In such cases treatment is most satisfactory. The same symptoms may be due to obstruction within the nasal cavities, and may be relieved by the operation appropriate to this condition. Most obstinate, in my

* Read before the Louisville Medico-Chirurgical Society, January 4, 1901. For discussion see page 137.

experience, are the cases in which a general hyperemia of the nasopharynx is the only cause to be detected.

2. *Interference with Deglutition.* This may exist either as a slight discomfort or as acute pain. As illustrating the former and at the same time showing how entirely misleading the history as given by the patient often is, I may relate the following case: A very intelligent lady from Somerset, Ky., consulted me for a discomfort in swallowing, resembling the sensation of a foreign body moving up and down. She observed it first after eating watermelon, and was confident that a seed had caught in her throat and slipped up and down. The examination showed a post-nasal soft polyp about the size of a chestnut growing from the nose and resting on the upper surface of the soft palate. Its removal gave her entire relief, and then for the first time she realized to what extent her nose had been obstructed. Acute pain in swallowing may be due to ulceration on the upper surface of the soft palate, generally syphilitic. It is characteristic of specific ulceration that when at rest its pain is far less than that of tuberculosis or carcinoma.

3. *Nasal Obstruction, with its Long Train of Consequences.* When this develops in the adult, the nose itself being clear, it is often due to a post-nasal polypus, or perhaps several such growths. Their usual origin is the posterior portion of the middle turbinated bone. The size they attain is often remarkable, sometimes as large as an English walnut. The youngest patient in whom I have seen this disease was a boy, eleven years old, both nostrils being completely occluded. The most remarkable case of the kind in my experience was in a young negro man about thirty years old. His general appearance was that of extreme exhaustion and malnutrition. He declared that he had vomited every thing he had swallowed for six months or more, and that a few hours before his visit to me he had vomited up the growth, which was to be seen lying on his tongue. This growth was about the size of my thumb, firm in consistence, dark red in color, smooth in outline, and several inches in length. It grew from the posterior nares. It was removed by slipping a galvano-cautery loop over it, carrying well up toward its origin, and burning it off. The microscopist reported that it was a mucous polyp which had undergone fibro-cystic degeneration. Hanging down in the pharynx, it had caused almost constant nausea. There is not the same tendency to recur in these growths as in the multiple polypi within the nose, the latter being often symptomatic of a disease of the ethmoid. Few operations in minor

surgery give more brilliant or complete relief than the removal of one of these large post-nasal polypi.

4. *Symptoms Referable to the Ears.* Among these we find deafness in greater or less degree, tinnitus, occasionally pain and an over-resonance of the patient's own voice. Naturally, the causes of these affections most amenable to treatment are such as can be removed by surgical means, adenoid tissue, posterior hypertrophies, and polypi.

5. *The Voice.* This may be impaired either by growths which lessen resonance by removing the "sounding-board" function of the naso-pharynx, or by affections which cause an oversecretion of mucus and frequent clearing the throat. The latter condition I have treated quite frequently in singers. Often the training of the throat muscles they have undergone is of the greatest assistance in the operative treatment of the naso-pharynx.

Method of Examination. The ease with which the naso-pharynx may be examined by post-rhinoscopy varies very greatly in different individuals. The varying distance between the soft palate and the post-pharyngeal wall is one cause of this variation, but even more important is the control of different individuals over their throat. This is largely a matter of patience and tact on the part of doctor and subject. I have often found White's palate retractor of the greatest assistance both in examination and treatment. I can not but think that some of my friends who fail to get any advantage from it are deficient in the method of its use. Having cleansed the naso-pharynx with post-nasal syringe or spray, a five to ten-per-cent solution of cocaine is applied to the posterior and upper surface of the soft palate, soaked in a little cotton on a probe bent at right angles. After a few minutes' delay the retractor is pushed around the palate and the patient directed to take a deep breath with the lips (not the teeth) closed. In so doing the soft palate is relaxed and brought forward, and the retractor may be fixed on the upper lip. The patient should be directed to continue to breathe naturally as the tongue is depressed. Posterior rhinoscopy with or without this assistance will quickly reveal the presence of new growths, hyperemia or ulceration. In a few cases tying the palate forward with a catheter carried through the nose and brought out through the mouth has been more satisfactory than White's retractor; but generally the latter has been less uncomfortable to the patient and more efficient in drawing forward the palate.

Treatment. For the removal of the post-nasal soft polypi Jarvis' snare has been most useful to me. I generally use No. 5 piano wire. The snare being arranged, and the wire drawn somewhat back, is introduced through the nose and its adjustment over the polyp accomplished with the aid of the rhinoscopic mirror; the surgeon holding the mirror in his left hand, the snare in his right, while the patient holds down his tongue with the depressor. Though this may sometimes be accomplished without fixing the palate, still this is often necessary, and by the methods described is usually easy. As a rule there is no difficulty in operating at the first sitting; occasionally a few visits are necessary to train the patient's throat. In soft polypi the snare may be rapidly closed, but in posterior hypertrophies, and, of course, in harder growths, to avoid hemorrhage, considerable time should be spent in cutting.

In adenoid tissue in adults the indications for its removal are, in my experience, more often oversecretion of mucus and disease of the ears than well-marked nasal obstruction. A complete removal is therefore all the more necessary. The ideal way to accomplish this is to observe the application of our instruments with the rhinoscopic mirror. By the devices already described this can almost always be accomplished. Both curette and forceps are, in my mind, often called for. The curette is quicker, and with a few good sweeps may often remove nearly the whole growth, but quite frequently the roof of the nasopharynx runs up to an acute angle, and the curette not fitting in this will leave an adenoid mass to keep up hyperemia and oversecretion. Around the mouth of the eustachian tube, too, the forceps are often more efficient. As an application to syphilitic ulcers in this locality, nothing has been better in my hands than nitrate of silver applied on a mop in thirty to sixty grains to the ounce solution, after cleansing with syringe. It should be applied directly, and only to the ulcerated surface.

LOUISVILLE.

THE DANGERS OF GLASSWARE.

BY J. S. HOSKINS, M. D.

In several shapes we use glassware to hold preserves, jelly, salt, milk, etc. By these I mean the new fruit jars that have popular devices, such as rubber bands and glass lids, and wire appliances to hold down the lid; also those which have screw or spiral necks, upon which the zinc top turns. The danger of their use is purely from the

nicking of the sharp-edged, flat, ground periphery or ring of the neck of the jar. In introducing the preserves, or whatever it may be, the housewife, in using the spoon in putting in contents, is apt to nick the edge, so that particles of glass fall into the contents of the jar unobserved. The second factor liable to break the edge of the jar is the adjusting of the lid and unscrewing it. The lids, glass or zinc, are pressed down with such force in twisting or untwisting, or by pressure of wire spring, that particles of glass are splintered off and fall into the contents of the jar. Now, when these preserves are served at the table, the dipping in and out of hard metal spoons insures almost to a certainty the nicking of the neck of the jar. The dish into which the preserves or fruit is placed is frequently of glass, and I care not whether of the finest cut glass or the ordinary cheap molded variety, the danger is about the same. The glass butter-dish is another source of danger.

In these days of cheap imitations of what we eat, drink, wear, or look at, we have the cheap glass tumbler in which manufactured jelly is sold by the grocer. The contents vile, cheap ising glass or animal jelly, with artificial flavors to represent grape, plum, currant, etc., but, as pertinent to this article, it is the same cheap, filed edge of the glass that holds the jelly that is dangerous, for on many of them a very close-fitting tin lid is affixed. It requires considerable force to lift the lid, and the sharp glass edges are almost necessarily nicked, the particles falling on the surface of the jelly. Mustard tumblers also come in for criticism. Away with the manufacture of cheap jelly in its cheap glass, for its dangers of container and contents.

Next comes the new, highly dangerous milk bottle, delivered by the milk man. Often his dirty fingers seal the bottle, with its clean-looking waxed paper lid. The lid is handled first, then pressed home into the neck. In my own home, in removing a lid with a fork, a long splinter of glass was found adhering; and I have frequently noticed that fully two thirds of many a bottle was nicked. Some of these particles are poured direct from the bottle upon oatmeal or into tumbler at the table, or to mix into flour dough for bread and biscuit, and cakes, etc. In regard to milk receptacles, I regard a return to the old-time tin pint or quart cup preferable, as the driver's fingers do not come in contact with the milk, and the milk comes from a faucet direct to the cup.

A new device for extracting lemon juice has come to my notice; in fact, was brought to my own home. I would advise any one who has

one to throw it in the ash-barrel. It consists in a conical, serrated summit rising from a circular piece of glass, with slots for the draining of juice. This is placed over a tumbler, and a half lemon is pressed and turned upon its edges. The sample I had in my possession had crumbly edges, easily dislodged by gentle pressure. These squeezers are of extreme danger. I should advise iron or wood in preference.

The ever-present salt cellar and little bottle, or all the bottles of the cruet-stand, have been nicked. The particles fall somewhere, into salt, pepper, etc., to be sprinkled on meat, potatoes, etc., at the table. They have spiral necks, upon which the metal perforated lid is twisted with such force as to send minute splinters into the salt, pepper, etc. Have metal salt and pepper holders.

Now, all these glass articles of tableware, cooking utensils, bottles, pitchers, etc., are daily being nicked by usage, and fine and large particles of glass are daily being incorporated in our food and swallowed unobserved. I am confident that many obscure cases of intestinal trouble, hemorrhage from bowel and stomach, and inflammatory trouble of same, are due to swallowing powdered glass, thus puzzling the physician.

Lastly, the very pill, powder, or liquid given by the physician to relieve conditions due not only to other causes, but to obscure diseases caused by glass particles, may be prepared in a glass mortar with a glass pestle. The pill mass or powder or liquid mixture is quite frequently mixed in a glass mortar by the druggist, who uses a glass pestle or rubber. If the bottom of these mortars and the end of the pestle are examined they will be found to present the appearance of ground glass. Attrition takes place between pestle and mortar, and thus very minute particles are incorporated into the pill mass, powder, or liquid mixture, and in this shape is taken by the unsuspecting patient, prepared by the unsuspecting druggist, and prescribed by the unsuspecting doctor.

What is the remedy? Insist that our glassware be of the annealed edge variety until a substitute be discovered; that druggists use wood or iron mortars for rubbing up pill, powder, or liquid mixtures; that domestics and housewives exercise greatest care in removing jelly-glass and other lids from glassware, especially those procured from grocers.

Lastly, I would recommend that each household appoint an inspector, and thus the danger would be utterly banished. What I mean is

that a member of each household should serve as inspector. The particles of nicked glass, if examined with naked eye or with magnifying lens, will be found to have sharp, needle-like points or rounded razor edges, that puncture or cut into the mucous lining of the esophagus, stomach, or remainder of intestinal tract, and hemorrhage or inflammatory trouble ensues.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, January 4, 1901, the President, Louis Frank, M. D., in the Chair.

Probable Sarcoma of the Forearm the Result of Trauma. Dr. A. M. Vance: This boy is fourteen years of age, well developed, bright, and apparently in robust health except for the condition to be mentioned later. Last July, while in a "scrap" on the commons, he was struck by a companion with a board; in this board was a nail which penetrated the right forearm between the wrist and elbow, just in front of the bones. The wound remained open for a while, finally healing took place, and for four months he was perfectly well. At the end of this time he complained of some stiffness of the arm, and there appeared a tumor which is located in the front part of the forearm; it is well-defined and firm, with a little horn-like projection to the inner side of the ulna running backward. An X-ray has been used, and the fluoroscopic appearance is normal so far as the bones are concerned.

When I first saw the boy three weeks ago there was one inch difference in the measurement of the two arms. As an experiment I applied a Martin rubber bandage. Now the enlargement is only half an inch, but I think the diminution is due to pressure upon the soft tissues and not to a reduction in the size of the tumor. The tumor itself seems to be about the same as it was three weeks ago.

The interesting point in connection with the case is to know exactly what to do. As will be observed, supination and pronation are not interfered with by the growth.

Discussion. Dr. C. Skinner: From the history and appearance of this growth I would suspect an osteo-sarcoma.

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

Dr. W. O. Roberts: It seems to me very suspicious of sarcoma. I should suggest that the treatment pursued by Dr. Vance is a very good one. I suspect, however, that the diminution in the circumference of the arm is most likely due to absorption of fat from pressure of the bandage rather than a reduction in the size of the growth. I would suggest that he try iodide of potassium for a while. If no change occurs, remove a section of the growth, and if it prove to be a sarcoma, the arm should be taken off above the elbow.

Dr. A. M. Cartledge: This is almost certainly a sarcoma following the injury. The enlargement seems to involve both the periosteum and the fascia. I do not believe I would treat the patient by means of constitutional medication. I would certainly make an exploratory incision and take out a piece of the tissue for microscopical section, and await the opinion of the microscopist before subjecting the arm to amputation. I would do this at once, and if the microscopic appearance corroborated the clinical aspects, then I would amputate, probably near the shoulder joint.

Dr. A. M. Vance: The views expressed by Dr. Cartledge are exactly in accord with my own in regard to this case. It seems a terrible thing, however, to sacrifice the arm of a patient so young as this, and it is a great pity that we have been unable thus far to find some means by which such limbs could be saved.

In this connection I have a specimen which I would like to show, it being from a case somewhat similar to the one just reported. The specimen is the lower end of a femur, the result of an amputation done at the upper third of the thigh for a sarcoma. I saw the young man two weeks before I amputated. The history was that seven weeks before I saw the patient, while working at the wagon works, he received a blow, and when I first saw him there was a tender lump on the outside of the right femur. In investigating the history further I learned that he had been treated for rheumatic pains in the knee-joint prior to receiving this blow.

I was convinced at my second observation that it was a malignant growth, and advised an exploration, a section to be examined by the microscope, the anesthetic to be held up pending the microscopist's report, then if it proved to be a sarcoma, to amputate. This procedure was carried out. The growth proved to be a sub-periosteal sarcoma, and I believe it is similar to the case we have just seen. The growth is made up of large round cells and also spindle cells.

The question of importance in connection with this case is, what is the surgeon's duty? Should he amputate such limbs at the hip, or would the increased risk of amputation at the hip overbalance the difference between the risk of recurrence and the slight risk of amputation below the hip, with the benefit of an artificial leg prior to any recurrence? I reasoned that this young man would not have been more than half as useful on crutches as on an artificial limb. If the growth recurs, it would recur any way, and it being a sub-periosteal growth, I determined to practice a little conservatism and leave a stump which will enable him to wear an artificial limb.

Discussion. Dr. A. M. Cartledge: To me the most interesting is the last point mentioned. Dennis issued an elaborate work along this line in 1892, collecting about thirty-five cases of sarcoma, I think, following trauma, and the question of the site of amputation is fully discussed. The results seem to prove from an analysis of the cases reported by Dennis that amputation should be made as high as possible in all cases of sarcoma of the extremities following injury. I have had personally but one experience like this, and that was in the lower end of the femur, and in that case there has been no recurrence after six or seven years. Amputation was done as in this case. This would seem to offset the advantages, taking into consideration that the danger is so much less than primary hip-joint amputation.

In the case of the boy shown by Dr. Vance to-night, I think in his amputation he should go just below the shoulder, because certainly the statistics of Dennis prove unmistakably that the higher the amputation in cases of traumatic sarcoma the better the prognosis.

Dr. W. O. Roberts: In the last case reported by Dr. Vance, if the tumor involved the bone, I believe it would have been safer to amputate at the hip-joint; if it only involved the periosteum, then he did the proper operation. When sarcoma involves the bone it would be better to take the entire bone out. This, however, would not necessarily prevent a recurrence of the growth.

Not long ago I operated upon a girl who had a recurrent sarcoma on her head. Dr. Vance had amputated the leg in the thigh, I think, for sarcoma below the knee. I removed a tumor that involved the parietal bone. In this case there was a recurrence, but not at the same place. If we leave any portion of the bone that is involved in the disease, we will have a recurrence in the stump.

You will remember a case I reported some time ago of a gentleman who had a sarcoma of the forearm just above the wrist-joint and the back of the hand; the growth involved simply the soft structures. In this case I removed the tumors first, and afterward did an amputation above the elbow high up. Recurrence took place in the leg, in the groin, and in the abdomen. My experience with small round-cell sarcomata is that they invariably recur.

Dr. J. B. Marvin: I would like to ask two questions. Dr. Roberts has sounded one of the points I had in mind, viz., the difference in the character of sarcomata, depending upon the character of the cell, the small round-cell variety being the most malignant of all. I saw twenty-five years ago a case of sarcoma of the lower jaw of the giant-cell variety which was removed by Dr. Holloway, and recurrence has never taken place. It is the most beautiful specimen of giant-cell sarcoma that I have in my collection.

The other question is that if the bone is involved in sarcoma, it would be more likely to recur. In the case of the boy we have just seen, if the disease be sarcoma, and if it is periosteal, why is it necessary to go far above the elbow? Why not be more conservative for the time being? As Dr. Roberts has indicated, sarcoma, of certain kinds especially, might recur in the leg or somewhere else in the body. You run this risk any way, and is there any thing to be gained by taking the arm off nearly to the shoulder-joint rather than at the elbow, giving him that much of an arm for a while and running the risk of the growth not recurring any sooner?

Dr. Louis Frank: I examined the specimen taken from the tumor. It is undoubtedly a large round-cell sarcoma, osteoid in character, though not a true osteo-sarcoma. There are no bone cells in the growth.

I have had under observation for two or three years a patient operated upon a number of years ago by Dr. Holloway, in which resection of almost the entire lower jaw bone was made, probably the descending ramus only being left. There is at this time no evidence of a recurrence.

Another patient operated upon I have not seen for some time. I presented the specimen at the time of the operation to the Clinical Society. Amputation was done in the middle third of the thigh for a sarcoma of the lower end of the femur involving the bone. There has been no recurrence, and the patient is now in perfect health.

We know, of course, that certain forms of sarcomata are much more malignant than others, but I believe in most of these cases, if we are going to get a recurrence, we are going to get it any way, as probably infection of the blood has already taken place, and it may be metastases have already occurred.

In the case of the boy shown by Dr. Vance, I see no reason for doing an amputation at the shoulder-joint; I would be inclined to leave this boy as much of an arm as possible, certainly not going higher than just above the elbow, for the reason that we know this disease is spread through the blood-channels. If infection of the blood-channels has not taken place, we will not have a recurrence if we amputate above the elbow-joint.

Dr. William Bailey: There are two points to which I want to call attention, upon one of which I desire information for my own benefit particularly: Why does not sarcoma in connection with bone show itself under the X-ray? To look at the gross appearance of this bone it seems to me that the sarcoma ought to have been shown under inspection by means of the X-ray. Is it true that sarcoma is not shown in the picture when it is in connection with bone? What would have been the appearance of the bone before us under the X-ray?

Second, it occurs to me that if sarcoma involves the bone, as suggested by Dr. Roberts, that bone ought to be removed, but I do not see how that the connection of one bone with another in the joint would greatly endanger it. I doubt if in the case of the boy we have just seen there would be danger of the humerus being involved because the radius or the ulna is affected. This process would be stopped at the joint, because there is no direct bony relation, and I can not understand why it would be necessary to take off this boy's arm at the shoulder. If it is found that the disease recurs in the humerus under these circumstances, it seems to me it would be on the same principle that it would recur in any other bone of the body.

Dr. A. M. Vance: I have done a good many amputations for sarcoma, and, as has been stated, some of them recurred quickly and others did not. I have some cases where operation was done eighteen years ago, and there has been no return. I amputated the foot of the wife of a former member of this Society in 1883, and she is still living. I do not know what the average time for recurrence is. It depends upon the kind of sarcoma. In another case I removed the lower jaw

of a patient in 1883, the patient being shown to this Society at that time, and the patient is still living and perfectly well. Since then some of my patients operated upon for sarcoma have died quickly, others are still living.

In answer to Dr. Bailey's question: A sarcoma is not shown in an X-ray picture. I have seen some X-ray pictures where an outline of the tumor was shown in the bone; but I believe it was the periphery of the bone that gave the shadow instead of the tumor.

As to amputating above or below the elbow, I think the danger of recurrence and the danger of second operation over-balances the usefulness of the arm or any other good that could be gained by such conservatism. I would advise amputation of this boy's arm at such a point as to leave a shoulder-cap for his coat and nothing more. We know by experience that the higher we go the less recurrences we have.

The essay of the evening, "A Few Notes on Naso-Pharyngeal Diseases which are Common in the Adult," was read by Samuel G. Dabney, M. D. [See p. 126.]

Discussion. Dr. J. M. Ray: In my experience the majority of cases of "dropping in the throat," the so-called naso-pharyngeal disease, have their origin in the nose, and if the nasal cavity is opened and free drainage maintained, there is much less of this dropping. One of the most common causes of naso-pharyngeal disease, in my experience, is a remnant of a previous adenoid. I see a good many cases in which the pharyngeal tonsil is atrophied, leaving a small mass on each side, and between them a small depression filled with dry, tenacious secretion which produced a constant discomfort to the patient.

I have one of the palate retractors mentioned by Dr. Dabney, but never used it more than a dozen times. Patients complain more of the palate retractor than from the instruments I use in examining the naso-pharynx, and in the majority of cases it does not open a very much larger space for inspection. It is easy to introduce, but the patient complains of the pressure exerted, and if you have to allow the patient to swallow with the palate pulled forward, he is apt to complain bitterly. When I have been forced to use something to retract the palate I take two small Nelaton catheters, put one through each nostril, bring them out of the sides of the mouth, and tie them there. In this way I can expose the naso-pharynx better than by the use of a palate

retractor. The presence of the rubber catheters seems to be less uncomfortable to the patient than the metal retractor.

We all see a great many cases in which the ordinary nasal polypi, especially those springing from the under surface of the middle turbinate far back, dropping down into the naso-pharynx, being relieved of the pressure they are subjected to in the nose, develop rapidly and get to be quite large in size. It is remarkable what enormous masses we sometimes get out of the naso-pharynx. I have a specimen in my office which has been shown to a number, who have been very much surprised to think a mass of this size should have developed in the nose or throat. The majority of cases of so-called nasal dropping, in my experience, except the ones due to disease of the pharyngeal tonsil, have been due to nasal disease primarily.

Dr. T. C. Evans: I have never been able to grow enthusiastic over the palate retractor. I have found that, in addition to gagging, we nearly always get vomiting. This has been frequent when I have tried to use it. Like Dr. Ray, if I find it absolutely necessary to get the palate out of the way, I prefer to do it with the Nelaton catheter. Further, just at the critical point when I needed the palate out of the way most decidedly the retractor would let go. In the great majority of these cases the patient can be educated by a few hours' manipulation so you can get along without the use of either a catheter or a retractor.

In my experience nearly all cases of so-called naso-pharyngeal disease, as far as mucus is concerned, are dependent upon some obstruction of the naso-pharynx, or by the so-called third tonsil, which has already been mentioned.

Dr. W. O. Roberts: One case of polyp with a very long pedicle came under my observation several years ago. The patient claimed he had a large piece of flesh in his mouth which would come and go, that is, it would come up into his mouth periodically, and he would then swallow it again. I had him in my office; the growth came up into his mouth; it was fully as large as the first joint of my thumb; it had a pedicle longer than my little finger and not larger than a good-sized goose quill. I caught the growth with a pair of forceps and clipped it off with scissors. There was little hemorrhage, and the man never had any further trouble from it.

Dr. J. M. Ray: I heard a gentleman say this summer that he thought the majority of patients could be taught to reverse their tongue and introduce it into the naso-pharynx, and in this way clean out the

naso-pharynx. I have seen but two patients in my experience who could do this.

Dr. S. G. Dabney: I saw the point Dr. Ray has brought out alluded to in a medical journal not long ago. The writer of the article said he had communicated with Dr. Cohen and several other prominent throat men to ask their experience, and it seemed that none of them had observed patients who were able to reverse their tongue and cleanse the naso-pharynx in the manner described. It must be a rather rare accomplishment.

Taking up a few points mentioned in the discussion that were alluded to in the paper. The so-called dropping back into the naso-pharynx when due simply to a hyperemia of naso-pharynx without surgical cause—I said very little about this, especially its causation, because I know little about it, and because I have found no method of treatment that was satisfactory. I believe our books state that the great majority of cases are caused by nasal obstruction; I can not but think that the importance of this is overestimated. I certainly see a great many cases in which this symptom is present without nasal obstruction. The common cause of it, however, is the so-called Tornwald's bursa, which is really the remnant of an adenoid growth. These cases are very satisfactory as to treatment; the removal of the cause gives prompt relief.

I know my colleagues do not agree with me in regard to the use of White's palate retractor, but I believe if they would use it more, they would like it better. I had the instrument two or three years before I could use it successfully. By following White's directions more closely I have found it valuable. I have never seen vomiting following the use of this retractor. When there is a large growth in the naso-pharynx I hardly see how you can get a good view of the tumor and remove it without holding the palate forward by means of the retractor or cords.

Railroad Accident. Dr. W. O. Roberts: The night before Christmas I saw a negro man, thirty-five years of age, who was on the platform of a Dinky train; his hat blew off, and he reached out to get hold of it, and was struck by a pole and knocked under the moving car. His leg was run over and crushed off above the knee; laceration extended up to within a short distance of the groin. I saw him an hour after the accident occurred. He was brought to one of the infirmaries in an

ambulance without having taken an anodyne. When he reached there it was found he was a negro, and of course could not be admitted, consequently the ambulance had to be recalled, and the man was taken to the city hospital. Before he was moved, however, he was given one-quarter grain of morphine hypodermatically, and upon arrival at the hospital he was still in very good condition. His pulse was only 88; his temperature was not taken. His pulse had a good volume. He was put immediately upon the operating-table, and ether was administered. As soon as he was sufficiently under the influence of the ether to be insensible to pain, he was given salt solution under the skin.

As there was so much contusion of the soft structures where I expected to make my flap, I felt it would be unsafe to use Wyeth's pins, so I cut down and ligated the femoral vessels, and after that was done went on and made my flaps and disarticulated, catching a few small vessels that spurted as the operation progressed. The man has gotten along without a bad symptom; he has not had a temperature over 101° F. at any time; I saw him to-day; there is some little suppuration in the stump, but the flaps have healed except where drainage was used. It looks to me now as though he would certainly get well; his temperature to-day was 99° F., pulse 84.

I was struck with the small amount of hemorrhage after ligation of the femoral artery. It is claimed now that the shock during amputation is thought to be due almost entirely to division of the large trunk of nerves, and that if these nerves are cocainized before dividing, that lessens very materially the degree of shock. That was not done, however, in this case.

Discussion. Dr. J. M. Ray: The doctor's reference to the use of salt solution reminds me of the following case: A week ago I was called to tube a child for diphtheria. At that time my "tube finger" being injured, my office associate, Dr. Lederman, performed the operation. On the fourth day we took out the tube, and the child went along for twelve hours without it, when it again began to stop up and we had to reinsert the tube. When the tube was introduced the second time the child was very weak, exhausted, pulse bad, and we had to give an hypodermic of nitro-glycerine, and in addition to this, at Dr. Lederman's suggestion, we gave a high enema of salt solution. This was followed by an almost immediate beneficial effect; the child rallied, and after an hour or so was in good condition.

Dr. H. H. Grant: Dr. Roberts has reason to be congratulated upon his success in doing an amputation at the hip after such severe traumatism. It is well known that the mortality is high after amputation at the hip done for injuries of this kind.

In regard to the method he employed, I do not know really that it is to be commended; it seems to me that if there had been much hemorrhage, it would have been wiser to take no chance of losing more blood, although he seems to have succeeded very nicely. The operation he did was simply a modification of an older method. But there was pretty likely to be three or four ounces of blood lost in an operation of this kind, unless the laceration of the tissues prevented it. Under any circumstances the operation is one which speaks highly of his skill and manipulation to have gotten as good a result after such tremendous shock.

I am not willing to believe that division of the nerve is more than a very considerable factor in the production of shock, as there are certainly other conditions which contribute very largely to it; the most important is the loss of blood, as far as my observation goes. Of course the division of large nerves may produce temporary depression of the heart, which is usually promptly rallied from. Where a large quantity of blood is lost, the depression continues for a considerable time, and it is efficaciously and satisfactorily replaced by saline solution.

Dr. W. O. Roberts: This man lost very little blood, and what little bleeding there was seemed to be venous in character.

Multiple Neuritis from Arsenic. Dr. J. B. Marvin: I want to report a case of multiple neuritis from arsenic. Our books caution us about the possibility of arsenic in medicinal doses for any great length of time causing neuritis. I have never seen such a case until two weeks ago. This was in a young lady, seventeen years of age, who had been off to school in Missouri, and I suppose either from bad health, possibly from motives of vanity, some one gave her Fowler's solution to improve her complexion. She was a rather delicate, nervous, high-strung girl, an only child; she took as much as fifteen drops of Fowler's solution twice or thrice daily, for how long I do not know. She was brought home, and I saw her, with a letter from the attending physician, who did not recognize how serious the trouble was. She has complete involvement of both legs; absence of knee reflex; extended or drop-foot, with pain

coming on paroxysmally and periodically, and still great sensitiveness of the muscles to pressure; this is the seventh week since the onset. She has rather good use of her hands and arms; she still has some impairment of the right hand.

I have seen multiple neuritis from the usual variety of causes, generally from alcohol; I have also seen cases following certain infectious diseases, but this is the only one I have seen resulting from arsenic.

Discussion. Dr. A. M. Vance: I noticed in the last three or four numbers of the British Medical Journal the report of a series of cases of neuritis resulting from arsenical poisoning, and the cause was finally located in the product of a certain brewery in Europe. Several people had the disease, and the beer was analyzed and its origin discovered.

Case of Pseudo-Hypertrophic Paralysis. Dr. A. M. Vance: I would like to mention a case that I saw some time ago. A gentleman came here from Knoxville, Tennessee, and brought a boy, fifteen years of age, six feet two inches tall. He was brought for diagnosis, having been told that he had spinal disease, hip disease, and almost every other joint in the lower extremities had been accused of causing his trouble.

I looked him over a long time trying to make out what was the matter with him, and finally came to the conclusion that it was a case of pseudo-hypertrophic paralysis. He was seen by Dr. Marvin, who confirmed my diagnosis. The father was not satisfied, and said he would give half his fortune, and he was very rich, if we could change our opinion about the matter. I incidentally heard the other day that had sought further advice in the East, that he had seen quite a number of distinguished specialists, and all except one had made a diagnosis different from ours; one gentleman agreed with us that it was a case of pseudo-hypertrophic paralysis.

This was an interesting case so far as the distribution of the disease was concerned; it was in his thighs. He had one prominent symptom lacking, as I understand it, his patellar tendon reflex was about normal. The cases that I have seen before have had an almost entire absence of the reflex of the knee.

There is little literature on this subject, but I believe there are more of these cases than we have heretofore recognized. Sometimes the patellar tendon reflex is unimpaired. This boy had the typical gait; the hypertrophy of his thighs was marked; there was no power.

Discussion. Dr. J. B. Marvin: The age of the man and his physical appearance were against this diagnosis. It is also unusual for this condition to develop so late in life and in the thigh muscles.

Dr. B. C. Frazier: How rapidly had this man grown? Had this rapid growth been of one or two years' duration?

Dr. A. M. Vance: He had always been large.

An Interesting Obstetrical Case. Dr. J. A. Ouchterlony: I would like to report a case of some interest: A lady well up in the thirties was delivered three weeks ago. The labor, although it was the first, was quite easy; the child was born before I reached the house; a neighboring physician was called suddenly; when he arrived the child was already born. He removed the afterbirth, which was reserved so that we both examined it together, and it was found to be entirely intact. The woman made a good recovery up to the end of the second week, when she sat up, and all of a sudden she had a hemorrhage. These hemorrhages recurred for several days. I made an examination, and the first time found nothing; I thought the uterus was somewhat larger than it ought to be, but that was all. After several days I made another examination, having tamponed her well, and I found a foreign body in the cervix. I tamponed her very thoroughly, and after several days' tamponing I found what seemed to be a mole which had been firmly attached to the uterus. It was a little larger than a large English walnut. When it was cut in two it was discovered that there was a serous membrane lining the small cavity. As soon as it was removed all hemorrhage ceased, although I kept in the tampon for forty-eight hours afterward.

I do not think I have ever met with a case of the kind before, and think they must be rather rare.

Case of Puerperal Eclampsia. Dr. J. G. Cecil: I wish to report a case of puerperal eclampsia, with reference to the line of treatment adopted, which I should like to hear criticised. The patient was seven and a half months advanced in her first gestation. She was twenty-four years of age, apparently a healthy, strong, well-developed woman. I had seen her once or twice before her final sickness, and had had one examination of her urine made. Quite a careful analysis of the urine was made, but there was nothing of importance in the report—nothing alarming, at any rate.

Last Sunday morning I was called to see the patient in the country—she lived at Anchorage, Ky. I was called early, and, there being no

trains, had to drive out, reaching there at 8.30 in the morning, and received this history: That early in the morning, probably about 1 o'clock, she became restless, and soon afterward had been seized with convulsions, which had recurred during the entire morning, and when I arrived she had had as many as ten; she had one immediately after my arrival, which I could not control. I happened to have some chloroform with me, and as soon as it could be gotten ready I began treatment, sitting by her bedside watching for return of the convulsions, and succeeded in controlling, in a measure, all subsequent convulsions, although she had four, I think, not very profound ones after I arrived, the last one being at 3 o'clock in the afternoon of the same day.

The treatment I adopted in this case was, first assured myself that there was no attempt at labor. The uterus was found to be high up, and there was no dilatation of the cervix. She had suffered at times with some little restlessness, which seemed to indicate labor pains, but we could not tell whether they were really labor pains or not. She was entirely unconscious from the time I saw her. As soon as it could be secured, I gave her forty grains of chloral by the rectum, and injected two pints of saline solution under the skin. I was very much pleased with the effect produced by the salt solution for a time; the pulse was improved quickly and markedly. The general appearance of the patient was much improved; her color returned, changing from a cyanotic condition to quite the natural color; her respirations were reduced also, which before had been thirty-five to forty; they were brought down to below thirty to the minute.

At 10 o'clock in the morning there seemed to be some little evidence of labor approaching, and I began to dilate the cervix as well as I could with my fingers. This, however, was slow work. She was a very muscular woman, and it was exceedingly difficult to introduce my fingers high enough to do any effective work at dilatation. The tendency to convulsions existed all the time up to 3 o'clock. I gave her at 11:30 a large injection of saline solution (two pints) by the bowel, which was retained. Later on in the afternoon I gave her two pints more of the same solution. Altogether she received two quarts under the skin during the day, which I believe had quite a decided favorable impression. It seemed to be that the whole situation was very much improved by this treatment. Later on in the afternoon I gave her another dose of chloral, forty grains, per rectum. In all she received eighty

grains of chloral. I then found that labor was progressing better, and at 6 o'clock in the evening I succeeded in dilating the cervix partially, and at 8:30 applied forceps and delivered her of a small child without any especial difficulty.

There was no evidence of the return of convulsions, although she was unconscious during the night and until her death the next day. However, after the child was delivered, we allowed her to come from under the influence of chloroform; she had been taking it more or less continually during the day, and we had used eight ounces of chloroform all told. As soon as the child was born we gave her three drops of croton oil, followed by large doses of compound jalap powder, which acted promptly, and later on in the evening of the same day acted very freely. After the action of the chloral, salt solution, and purging, she seemed to revive considerably. She became partially conscious; she would respond to questions; would drink water freely, showing that much evidence of return to consciousness. I neglected to do one thing which I regretted, and that was I did not catheterize the bladder before giving the salt solution; but on my arrival at the house I found the bed-clothing and night-gown saturated with urine, so I presumed she had an involuntary discharge of urine during the convulsions in the early morning. About an hour after the first two pints of salt solution had been injected under the skin I catheterized the bladder and found fully a pint of turbid urine, so I can hardly think that urine was secreted before my arrival; probably the bladder was empty when I arrived. I am not certain of this. Later on in the day, after administering the second two pints of salt solution, I again catheterized the bladder and found that the kidneys had resumed action, and the urine was very much improved in appearance. Of course it was albuminous.

She improved during the entire night, and by the next morning I left her quite comfortable. Her pulse did not maintain a condition that I liked, but I gave her some digitalis, hoping for the best, and left her in charge of Dr. Thompson, whom we all recognize as a most excellent practitioner. During the day she did very well until late in the evening, when the doctor telephoned me that she was doing only fairly well. I saw her again Tuesday morning; she was then growing rapidly worse, and died about 12 o'clock on Tuesday.

The only point of unusual interest to me in this case was that this was the first case of puerperal eclampsia in which I have used saline

solution, and I can not help but believe that there is a future for this line of treatment, which reports have already indicated. This woman had ten severe convulsions, with no period of relief during the time extending over seven hours, and I can not help believing that if under more favorable circumstances we had gotten to this case earlier, and could have controlled the convulsions with chloroform, and given the salt solution earlier, it would have been good treatment, with a more favorable outcome.

Discussion. Dr. H. N. Leavell: A few years ago I had occasion to look up this subject closely, and the case I have in mind developed after the birth of the child. The point of especial interest was complete paresis of the bowel. The treatment instituted was, in a measure, similar to that outlined by Dr. Cecil, with the exception of the saline solution, which was not used. Paresis of the bowel was marked, and the patient was given fourteen drops of croton oil without any result. It required nearly a pound of chloroform to keep her from having convulsions over a period of twenty-four hours. The effect of the chloroform was excellent, but nothing else had any influence on the convulsions. Saline solution, from the reports that have been made, seems to promise more in the treatment of eclampsia than any other treatment that we can possibly use.

An Unusual Injury. Dr. B. C. Frazier: The following case is rather unusual, not so much the injury itself as the manner in which it was received. A doctor in the city, on New Year's day, was playing with a little child, probably six and a half years old; the child had hold of the doctor's fingers of his two hands, and in some way the child's weight was borne on one finger, which resulted in breaking the metacarpal bone. It was an absolutely clean break; crepitation was marked, and there was considerable deformity. I saw him fifteen minutes afterward and put the hand in splints. I make this brief report as being of interest only because of the manner in which the finger was broken.

B. A. ALLAN, M. D., *Secretary.*

**NEW YORK ACADEMY OF MEDICINE—SECTION ON
ORTHOPEDIC SURGERY.**

Meeting of December 21, 1900.

Dr. L. W. Ely read a paper entitled "A Few Observations from the Lorenz Clinic," and Dr. H. L. Taylor a resume of the treatment of orthopedic affections at Berck, France.

Reposition of the Congenitally Dislocated Hip. Dr. Ely, in a recent visit to Vienna, had spent some time in observing the practice of Lorenz, who was receiving cases of congenital dislocation of the hip from all parts of Europe. The cutting of tendons and instrumental traction were rarely seen. When the head of the bone had been replaced with suitable force and manipulation, the reduction was maintained by a most elaborately applied plaster of Paris spica, which did not include the trunk, and extended below only to the knee. The patient was then sent home to stay several months. The results were good, and sometimes so brilliant as to justify the enthusiasm of the operator, who believed that when a knowledge of the operation was widely spread, reduction would be made at such an early age as to almost preclude the possibility of a failure. The remarkable statistics of successes which had been published had their origin partly in enthusiasm and partly in the undoubted excellence of a method applied with requisite technique.

Dr. H. L. Taylor reported that the experience of Calot at his hospitals at Berck, on the channel coast of France, had showed that the bloodless reduction of congenital dislocation of the hip was applicable in children up to eight years of age, or later in exceptional cases. Active treatment covered from six to twenty-two weeks, and included two or three weeks' traction with a weight of from 10 to 20 pounds, and at the operation the application of a force of 300 pounds for ten minutes, to bring the head of the bone down to or below the acetabulum. When the retaining apparatus was removed, massage and training in walking completed the treatment. Patients had recovered without the trace of a limp. He had practically given up the open method. The correct attitude obtained by cutting would be at the expense of limitation of motion or ankylosis, which might be properly sought by this method in certain cases in which replacement was impossible.

Dr. R. H. Sayre had seen Lorenz operate last year in Paris at the Redard clinic. The patient, a child of about eight years of age, was moderately disabled by a single dislocation of the hip. The thigh was made to form an angle of perhaps 20 degrees posterior to the plane of the body. A great deal of force was employed for this and in turning the limb in various directions. The head of the femur could be heard as it popped around on the ilium in what must have been a mass of lacerated tissues. The spica, which was nearly two inches thick where the strain came, included two loose strings for subsequent use in scratching the skin and keeping it clean. The head did not assume a permanent residence in the acetabulum. It was said that it would do so after the child had walked about for a year or two in the spica, a question which would have to be answered in due time.

Dr. C. H. Jaeger had recently spent six weeks at Vienna, and reported that the treatment of congenital dislocation at the Lorenz clinic was exclusively by the bloodless method. Double cases were treated singly. The results were very favorable. The spica was applied with great care. Only a thin layer of cotton padding was used. The plaster bandage was applied very snugly, the thigh only being enclosed, and a narrow strip going about the pelvis. This left the knee and ankle free, and also the whole spinal column. The limb being thus fixed in extension and abduction, the patient soon learned to walk without crutches and with (in single cases) a high sole on the sick foot. It was most interesting to see a child with double dislocation, with both legs strongly abducted, spread-eagle fashion, walking beautifully, hopping with one leg and then the other, without a stick or help of any kind. Lorenz was accustomed to lay great weight on having the parents of the patient extend the knee many times daily, to prevent contracture. In opposition to these views Hoffa strongly advocated the open method.

Dr. W. R. Townsend said that Hoffa had stated in very positive terms that none other than the bloody operation could be of any use. An American authority also had reported that in a large number of open operations only two or three had exposed an acetabulum in which it was possible to place the head. The views and practice of Lorenz, however, were those of one whose experience with the open operation had been greater than that of all other operators combined. In one of the dissections reported by Dr. E. H. Bradford the capsule had been found pushed in front of the head of the bone in such a manner

that a perfect reduction could not be made. This had led to the suggestion that in some cases the open operation might be modified by slitting the capsule instead of gouging or boring the bone, which might lead to ankylosis or limited motion.

Dr. Jaeger thought that Hoffa was dissatisfied with the bloodless procedure partly because of the position in which he fixed the limb after reduction of the deformity. He applied the spica with the limb in extension and strong inward rotation, which could not afford a very firm hold for the femoral head in the acetabulum. In this position it was probable that re-luxation would occur during the application of the bandage or on the first attempt at walking.

Dr. T. H. Myers said that those American surgeons who, after trying both methods, favored the opening of the joint in every case, were at variance with Lorenz. In his own experience, which had been considerable, he had not yet opened a joint, believing that the bloodless method should be tried first. It secured some perfect results, and in the results which were not perfect the head was placed anterior to or above the acetabulum, which was better than to leave it on the dorsum.

Dr. G. R. Elliott had passed several weeks with Lorenz in 1896, and had seen him operate many times by the non-cutting method, having already begun to discredit the cutting operation, which he had done so much to perfect. There could be no possible doubt of the good results obtained. He had seen many instances, and had repeated them in his own practice. Success lay in the thoroughness of the procedure and in the perfection of the technique: (1) The head of the bone should be brought down to the level of the acetabulum. (2) It should be lifted over the posterior edge of the acetabulum. (3) Abduction should be extreme, even posterior to the mid-plane of the body. (4) The plaster bandage should be pressed posteriorly against the joint to keep the reduced head from slipping backward. Great force was often required, but neglect of any point would leave the head of the femur resting on the posterior acetabular edge, to be dislocated as soon as the bandage was removed. Lack of success would be due to want of technique, leading to imperfect reduction. Thorough padding was necessary beneath the bandage. Blood had appeared in the urine of a patient operated on by him last week. The child had been laid face downward to facilitate fortifying the splint posteriorly, and the soft plaster bandage had pressed against the abdo-

men and hardened. Cutting the bandage relieved pressure, and the blood disappeared.

Sea Air for Tubercular and Rickety Patients. Dr. Taylor, in his review of the treatment at Berck, said that Calot was an enthusiastic advocate of sea-air for patients affected with external or peripheral tubercular lesions, those of the skin, glands, bones, and joints. He rejected phosphorus in the treatment of rickets, prescribing intestinal antiseptics and a diet mainly of milk and eggs. Many of his patients were kept recumbent. He affirmed that rickety deformities would disappear during a sojourn at the seaside.

Dr. Sayre had listened to Calot as he described the advantages of seaside treatment. His interest in the subject was shared by others of his countrymen, whose native enthusiasm perhaps lent a too rose-colored light to their views.

Dr. Taylor had been impressed with the picturesque quality of Calot's writings. His zeal often broke through the conventional boundaries of scientific composition. The reader was entertained and delighted, but not necessarily convinced.

Treatment of Pott's Disease. Dr. Ely said that Lorenz used a corset composed of perforated strips of celluloid, metal bands, and canvas. It laced in front, and was probably sufficiently comfortable, but could not be said to "splint the spine."

Dr. Taylor said that although Calot declared that neither braces, plaster jackets, nor corsets could prevent or arrest the deformity, all of his patients wore the plaster jacket after subjection to manual pressure directed against the kyphos. In certain cases, ablation of spinous processes without invasion of the tubercular territory was recommended in order to facilitate correction and avoid sores from pressure of the jacket. The use of suspension, the amount of manual pressure, and the degree of lordosis to be enforced were points to be settled for each case. Severe pressure and all traumatisms were to be carefully avoided, in marked contrast with the violent proceedings which called attention to the name of Calot in 1896, when he was claiming uniformly brilliant results from the outlay of all his strength on the kyphos, supplemented with cuneiform resections in obstinate cases.

Dr. Sayre said that Calot's recent methods, as he had heard him describe them, varied but little from those of Dr. L. A. Sayre when he introduced suspension and plaster of Paris jackets. Calot had,

however, secured a distinct advantage in extending the jacket up to the chin, instead of stopping at the top of the sternum, thus promoting lordosis even of the lumbar spine, and gaining a leverage over the entire spine, which was impossible when the upper part of the vertebral column was free.

Treatment of Joint Diseases. Dr. Ely said that at the Lorenz clinic joint diseases generally were treated by retention in plaster of Paris. The spica for hip disease usually had an iron stirrup running down from the bottom to take up the weight of the body.

Dr. Jaeger said that Lorenz taught that traction *per se* did no good in hip disease except as it caused fixation, and that fixation alone was necessary, as the inflamed joint could well bear the weight of the body so long as there was no rubbing of the joint surfaces.

Dr. Taylor said that Calot very justly believed that a stiff joint in a good position was better than a movable joint in a bad position. It was his practice to reduce the deformity by force, and retain the improvement with a plaster spica. Complete ankylosis in a bad position required subcutaneous osteotomy of the femoral neck.

Treatment of Abscesses. Dr. Jaeger had noticed fewer abscesses in patients affected with hip disease at Vienna than in patients of the same kind in America, which was not easy to explain except by climatic differences, as the poor there were poorer, and their nourishment probably worse, than in this country.

Dr. Taylor said that Calot forbade incision, curetting, and excision in Pott's and hip disease, unless the joint or abscess was infected or a sequestrum was found. He took the ground that patients affected with these diseases practically always got well under closed treatment, and always died under the open treatment. Abscesses were to be treated by roborant drugs, a full diet, correct hygiene, and rest. A cold abscess might be aspirated through healthy tissue and medicated by injections. By repeated aspirations and the application of compresses and bandages, openings which seemed inevitable might be averted, and in from four to eight weeks the abscess would disappear without a scar, and with healing of the bone in most cases. It was interesting to note that we had (1) in Calot a surgeon of ten years' active experience, formerly an advocate of scraping, incisions, and excisions, with the reputation of having done eighty excisions of the hip, who was now aggressively opposed to the operative treatment of diseases of the

joints, and (2) in Lorenz, a surgeon of great experience in the cutting treatment of congenital dislocation of the hip, who had given it up in favor of a bloodless method. The co-incidence and the contrast between the recent past and the present were quite impressive.

Lateral Curvature from Division of the Spinal Accessory Nerve.

Dr. R. A. Hibbs related a case as follows: A girl, fourteen years old, had had glands removed from the left side of the neck six months before she was first seen a few days ago. There was spinal curvature toward the right, with drooping of the left shoulder, paralysis and atrophy of the trapezius, and marked disability of the left arm. The patient declined an operation for uniting the ends of the spinal accessory nerve, which had evidently been severed at the point where it pierced the sterno-cleido-mastoid muscle.

Dr. Myers recalled the case of a similar patient, fifteen years of age, whom he had been observing for three or four years. He saw her eighteen months after the paralysis, and considerable permanent atrophy of the muscles of the shoulder had set in. There was spinal curvature toward the opposite side, which did not go on to be extreme, and was easily controlled.

Fracture of Cervical Vertebrae. Dr. Sayre related the case of a man who was carried home unconscious after a fall on the head and neck about two months ago. On regaining consciousness there was paralysis of the extremities, bladder, and rectum, in which there was slow improvement after two days. As every attempt to walk increased his symptoms, he was kept in bed several weeks. A diagnosis of fracture and dislocation of the fifth and sixth cervical vertebrae was made on his history, the flexion of the head, the absence of motion of the head and neck, difficulty in swallowing, and the disability of the left upper extremity. The diagnosis was confirmed by skiagraphs, of which it had been necessary to take several from different points of view. One of the negatives was taken after fastening a bandage tightly over one shoulder and under the opposite arm-pit, so as to make a gulch in which one edge of the plate had been forced so far as it would go. The skiagraphs and a brace were exhibited. The latter consisted of a leather and a steel collar attached to posterior steel rods and a pelvis belt. The head and neck would be thus fixed until consolidation was assured, the brace being capable of easy modification from time to time as the patient improved. He recalled an almost

exact counterpart in a case which occurred several years ago, in which the application of a jacket and jury-mast had been followed by disappearance of the paralysis.

Pneumatic Perineal Straps. Dr. Myers exhibited rubber tubes ten inches long and one and a quarter inches in diameter, designed to take the place of the ordinary perineal straps. Smaller sizes were also made. Each tube was provided with a removable cover of Canton flannel and a valve for inflation by a bicycle pump. The straps were not elastic. They were expensive but very durable. The pressure made by them was equalized automatically, and that made them especially comfortable for older children and adults whose weight made perineal support difficult.

THE EFFECT OF NUTRITIVE ENEMATA ON THE GASTRIC SECRETION.—Metzger's object was to determine whether the administration of nutritive enemata caused any secretion of hydrochloric acid. The experiments were made on dogs and human beings. Gastric fistulæ, according to Pavlov's method, were formed on the dogs. The technique of the experiments is as follows: The rectum is cleared out by an enema of water, and then, if after an hour the stomach is empty or gives no congo-reaction, the nutritive enema was administered. Neither water nor water and common salt cause any secretion of HCl. An enema composed of 125 grms. milk, 2 grms. yolk of egg, and 2 grms. NaCl, caused either no secretion at all or only a very slight one. An enema composed of 100 grms. bouillon, 50 grms. red wine, and 2 grms. NaCl acted differently. In four out of five experiments there was within an hour a secretion of 4 c.c. of a strongly acid character. The secretion followed much quicker than with the egg and milk enema. Further investigation proved that the action depended not on the bouillon but on the wine. Thus wine without bouillon caused in two hours the secretion of 6 c.c. of fluid of a total acidity of 120, and HCl acidity of 110. Experiments carried out on patients gave substantially the same results. The stomach must be empty or contain no hydrochloric acid. The rectum is cleared out by an enema of water, and if after an hour the stomach is still empty, the nutritive enema is administered, and the gastric secretion is tested every half hour. In eight cases egg and milk caused a slimy fluid containing no free HCl. In some cases a little HCl developed after one and a half hours. Bouillon-wine enema, however, gave after half an hour a strongly acid secretion containing free HCl, which usually disappeared in an hour. The active portion is the wine.—*München. med. wchnschr.*, 1900, No. 45.

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MODERN DIAGNOSIS OF BLADDER DISEASES.

Since the invention of the cystoscope by Dr. Max Nitze, of Berlin, about twenty years ago, we have made great progress in diagnosis of the various diseases of the bladder. Associated with Nitze are the names of Casper, Albarran, Fenwick, Pawlik, Kelly, Harris, Koch, and many others who have greatly aided in the mechanical appliances, and whose clinical work has been of great advantage along the line of treatment as well as diagnosis.

The catheterization of the ureters is now easily accomplished by many instruments and methods, and thus we are able to go beyond the bladder and diagnosticate calculi in the ureter and pelvis of the kidney, tuberculosis, and many other diseases of this organ.

Our conception of cystitis has undergone great changes now that more careful study of the actual pathology has been made under direct observation, aided by bacteriological experiments. Catheterization of the ureters is of great value in determining which kidney is involved, and thus aids the urinary analysis for the surgeon.

Many operators now curette the mucous membrane of the bladder, and report excellent results in ulceration of this organ. Cumston, in this country, and Fenwick, in London, report good results from such radical treatment. The real credit for the progress made should be given to Nitze and Pawlik, and not to the many who have made mod-

ifications of their instruments and claimed the invention. Only in the last month a well-known surgeon in New York exhibited a *fac-simile* of Pawlik's or Koch's instrument and claimed an improved method for examination of the female bladder. Such eager claims for notoriety are too much on the increase in this country, and it is high time to call a halt and give the credit to whom it belongs.

It is remarkable how one of the best-known universities in this country is continually appropriating foreign discoveries, and, by changing them a little, thrusts them on the American doctor, who has not access to the foreign literature, as original work.

We have done and are doing good work in this country, but let us be true to the medical profession throughout the wide world, and not stoop to claim what is not ours, even if thereby we increase our own fame.

Current Surgical and Medical Selections.

DIAGNOSIS OF POTT'S DISEASE—M. Sireday, at a recent meeting of the Paris Academy of Medicine (Medical Press), read a paper on the above malady, in which he said that in the adult the evolution of Pott's disease is slow, insidious, and gives rise to certain symptoms which sometimes and for a long time are attributed to some other affection. As in the child, the morbid changes in the vertebræ are the first apparent manifestation of the tuberculous nature of the disease. The bacillary lesions show themselves ordinarily under the form of small circumscribed spots on the apophyses of one or more vertebræ without compromising the solidity of the column. It is thus that the characteristic deformity is frequently wanting.

The formation of erosions in the external surface of the vertebræ provokes the elimination of small caseous masses and drops of pus, which are enclosed in a thick fibrous sheath, similar to that found in the neighborhood of the dura mater when the same changes are produced in the interior of the rachidian canal.

As long as the abscesses remain small they adhere to the vertebral column, surrounded by false membrane, and form irregular nodules, like the drops of wax down the sides of a candle. The false membrane adhering intimately to the neighboring tissues, compresses the rachidian nerves, producing neuritis, manifested by intense pain and different motor and trophic troubles.

In extending far beyond the vertebral lesions, the condensation of the cellular tissue provokes sharp pains, which are frequently attributed to lesions of the neighboring organs.

It is thus that when the neuralgic pains correspond to the thorax, they simulate more or less those characteristic of pleural effusion, pulmonary congestion, pericarditis, aneurism of the aorta, and when at the base of the thorax they are frequently attributed to ulcer of the stomach, while if they are felt over the last ribs a renal affection is diagnosed.

Naturally a careful observer would eliminate one by one all of those affections, but he would rarely think of examining the spine. Yet in spite of the difficulty of the situation, it is possible to arrive at a correct diagnosis. The persistence, intensity, and the fixed position of the neuralgia, its resistance to therapeutic measures, the progressive extension of the painful phenomena to new nerve branches in the transversal, and, above all, in the vertical sense, the exaggeration of the tendinous reflexes of the side affected, constitute an *ensemble* of presumptions in favor of a rachidian lesion. A minute examination of the vertebral column will reveal more or less clearly a constant pain at a fixed point over the spinous or transverse apophyses, or of the body of one or more vertebræ, and frequently the immobility of certain vertebræ when the body is flexed or extended in an antero-posterior or lateral sense.—*The Medical Age*.

THE TREATMENT OF PNEUMONIA.—Dr. Nathan Raw remarks that patients are more often damaged than helped by the promiscuous drugging which they receive in this disease. At the outset three to five grains of calomel, followed by a saline every three or four hours, with which two grains of quinine are included, is beneficial. The ice-bag, or even a mustard and flaxseed poultice, may be indicated for pain. To digitalis much has been attributed, but on the whole it has not been a success. If the heart's action becomes very rapid, with a quick and irregular, soft pulse, it sometimes does good when given in large doses, say fifteen or twenty minims of the tincture every two hours until two drams are taken, or digitalin hypodermatically, one thirtieth to one twentieth of a grain, has a marked temporary effect in tiding over the patient during a critical period. Ten grains of chloral with four drams of the infusion every four hours gives the patient much relief from delirium and sleeplessness. Objection is made to antipyretics, although sponging the surface with ice-water is recommended. Ammonium carbonate acts as a stimulant and expectorant, but readily disturbs digestion, and must then be discontinued. In progressive cardiac failure, brandy in from six to twelve ounces every twenty-four hours is indicated. In many instances alcohol in any form is not required. Strychnine is a most valuable cardiac tonic, and given hypodermatically in doses of one twentieth or even one twelfth of a grain will sometimes have a miraculous effect upon the heart. His experience with oxygen has not been, on the whole, good. The prophesy is made that the treatment of the future will be the antitoxic treatment, used early, so as to abort the disease by destroying its toxins. (*Medical Press and Circular*, 1900, No. 3181, p. 417.)

Dr. J. C. Walton relies more on Norwood's tincture of *veratrum viride*, two to four minims every two hours or oftener, watching its effect on the pulse, gradually bringing it down to 70 or 80 and holding it there until the disease is under control. In combination with ice it more nearly approaches a specific than any other treatment. Ice-bags constantly applied over the inflamed lung and over the heart, not only for their effect in reducing the temperature and in bringing down the pulse and respirations, but for their constricting effects on the capillaries, add much to the comfort of the patient and frequently abort the disease. If the treatment should fail to arrest the disease, the subsequent stage is milder and more easily managed. If it goes into the second stage, give ammonium carbonate, five grains every two hours, not only for its stimulating effect, but because it is the best absorbent which we have. By thinning and dissolving the tenacious secretion the patient is enabled to expectorate without difficulty, adding, when necessary, especially if the first sound of the heart is weak, alcohol. Strychnine is the best stimulant, and should be used freely when indicated. Digitalis is of great service when the pulse is weak and rapid. Transfusion of normal salt solution should be employed in extreme cases. (*Virginia Medical Semi-Monthly*, 1900, No. 3, p. 77.)

CARCINOMA OF THE RECTUM.—Deaver (*Phil. Med. Journal*) describes the different forms of carcinoma which may affect the rectum. The vast majority are of the cylindrical-cell type, while clinically several varieties may be distinguished, scirrhus, the medullary or encephaloid and colloid. The symptoms, especially the early ones, appear to bear no relation to the gravity of the affection. Pain is the most frequent symptom; it is often intense, tenesmus is often distressing, and diarrhea is constant and troublesome. The prognosis depends upon the position and extent of the growth and the time which has elapsed since beginning. Ordinarily the disease is situated about $2\frac{1}{2}$ to 3 inches above the anus, but it may start higher up, and then the growth is more rapid, as a rule, and an earlier colotomy may be necessary to relieve the pain. The characteristic "feel" and odor render the diagnosis unmistakable. The only condition that might be confused with it is indurated ulceration causing stricture. The insidious beginning of the disease makes it advisable, in Deaver's opinion, to make a rectal examination in every case of more or less continuous diarrhea. The radical measures offer the best chance of relief. His practice in dealing with carcinoma of the rectum is as follows: Where the growth involves the terminal part of the rectum and includes the anus, the operation of removal is made through the perineum; the mucous membrane of the bowel above being stitched to the skin margin of the circular perineal incision. Where the growth involves the lower portion of the rectum, exclusive of the anus, it is removed through a posterior median incision, taking away the coccyx with, in many cases, the last one or two segments of the sacrum. By this modified Kraske method, as in that for the removal of a growth occupying

a higher location, the diseased portion of the bowel is excised and end-to-end union of the divided bowel made. This permits of re-establishment of the function of the bowel. Where the growth occupies the upper portion of the rectum, and to some extent the terminal portion of the sigmoid, it is removed through the posterior median incision, taking away the coccyx and the lower three or four segments of the sacrum. Here end-to-end union of the divided bowel is practiced. Cases reported by him in the Transactions of the Academy of Surgery, of Philadelphia, for the year 1900, show three successful cases with complete restoration of bowel function. The section of the sacrum is made with chisel or osteotome, and the ligaments and soft tissues cut with scissors curved on the flat and made to hug the bone, thus dividing the vessels where they are smallest and readily reached. The amount of bleeding is not great, hence shock is of minor importance. On one occasion he first opened the abdominal cavity and tied the inferior mesenteric artery. This he has never repeated, as he considers it too much surgery where less suffices. He does not consider preliminary colotomy necessary, and would practice it only when incision of the rectum is to be done later. He regrets that more radical surgery is not permissible, by which he means removal of the lymphatic glands of the mesosigmoid. If this could be done, the outcome would be more promising. When the growth occupies the rectum high up and can not be located by examination through the rectum and vagina, he opens the abdomen in the left iliac region. The growth in the rectum can be taken out by a posterior incision; the sigmoid is divided transversely and removed with its mesentery as far down as the growth, and the margins of the upper opening are stitched, closing the lower part of the incision entirely.—*Journal A. M. A.*

REDUCTION OF HUMP IN POTT'S DISEASE.—Dr. Phocas. (*Jour. Am. Med. Assoc.*) In certain exceptional cases, in which the hump is dorsal or dorso-lumbar and of recent development, without an abscess or much alteration of the general health, or when there is paraplegia, extension under chloroform with very slight digital pressure may succeed in reducing the hump. The family should be warned of the dangers, and the method should be appreciated at its true value. This cautious and rare procedure is all that remains of the famous forcible reduction of the hump vaunted by Calot. Even with this apparently harmless procedure, Dr. Phocas had the following experience: A girl of thirteen, with right torticollis, painful on the slightest movement, had a severe attack of la grippe ten months previously. A cervical arthritis was diagnosed, and the head gently straightened under chloroform and an apparatus applied. The manipulations were all extremely gentle, but the child was completely paralyzed the next day and died the day after. The autopsy showed Pott's disease. All the ligaments had been destroyed, and the spinal cord had been held erect only by the immobilization of the bones by the muscles. The moment that this immobilization ceased, the bones slipped and crushed the cord. Two other

patients died from meningitis seven and three months after intervention, a total of three deaths in the twenty cases in which reduction was done. The hump has recurred in all of the seven reduced according to Calot's directions. The results have been satisfactory in only one of the twenty cases, although in three the hump was more or less diminished, and recurred lower down in another. In one case, paralysis appeared six months after a gentle reduction.—*The Post-Graduate.*

TWO PREGNANCIES AFTER DOUBLE CASTRATION.—In the *Munch. Med. Wochenschrift*, 1900, No. 10, it is stated that Kossmann removed both ovaries from a woman with intense bilateral ovaritis. The operation for removal was an anterior elytrotomy, and the tubes were left *in situ*.

He was much surprised when, eighteen months later, the husband of the woman called to inform him that his wife was pregnant. In due time the child was born after an easy labor.

Kossmann was certain that no supplementary ovary had been present, as it chanced that this subject is one in which he is specially interested, so that a third ovary would hardly have escaped detection.

He was not so certain that in placing his ligatures and cutting away the ovaries he might not have left a small fragment of the latter in the stump.

As if to further confound the wisdom of those who would bring about an artificial menopause by double castration, this woman subsequently gave birth to another child.—*Obstetrics.*

NEPHRITIS IN CHILDREN.—Discussing the subject of nephritis at the American Pediatric Society, Rotch calls attention to the striking want of correspondence between the clinical symptoms and the pathological condition of the kidneys. It is almost impossible to make a diagnosis of any special form of renal disease in young children by the examination of the urine, observing the same rules which we are accustomed to follow in forming a diagnosis in adult cases. Often, for instance, we find clinical symptoms corresponding to glomerular nephritis, when the pathological conditions found after death do not conform to that diagnosis. The most important question we have to decide is as to the form of nephritis. The acute interstitial nephritis running an acute course, just as glomerular nephritis does, is more characteristic in young children than it is in adults. An acute interstitial nephritis is usually secondary to some infectious disease, such as diphtheria or measles, while glomerular nephritis is more characteristic of scarlet fever. It would be interesting to see some autopsies following influenza, as it is probable that they would be of the interstitial type. The complication, however, is a rare one. Acute nephritis can only be differentiated from the glomerular variety by post-mortem examination, as there is nothing in the clinical symptoms to distinguish them.—*The Edinburgh Med. Journal.*

Special Notices.

MAL-ASSIMILATION.—I have prescribed Seng for indigestion and mal-assimilation, and find the improvement marked from the beginning of its administration. I have prescribed it very successfully in a number of cases. Whenever I meet the two above conditions I never fail to use it.

J. H. LAWRENCE, M. D.

Smithfield, Va.

CARBUNCLES.—Creel has relied on Ecthol given internally, in doses of a teaspoonful, in cases of carbuncle, flaxseed poultices applied locally, emptying of pus, scraping out of dead tissue, and cleansing with peroxide of hydrogen; after this a topic application of Ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.—*Journal American Medical Association.*

THE GENITO-URINARY CONDITIONS WE FIND IN THE WEAK AND NERVOUS TYPES MET BY SANMETTO.—Sanmetto clinically fulfills the promise of its pathological action, hence its efficacy and seeming popularity with the profession in treating genito-urinary cases characterized by irritable, painful, frequent, and scanty micturition—conditions we find in the weak, nervous types.

W. H. CHRISTIE, M. D.

Omaha, Neb.

Prof. Materia Medica and Therapeutics in the Omaha Med. Col.: Phys. to Immanuel and Clarkson Memorial Hospitals.

THE USE OF BROMIDES IN HYSTERIA, DELIRIUM, ETC.—Considerable has been written on this subject which has all the respectability of ancient lineage, and, like most other obscure things, has received no stint of authoritative attention. The etiology of hysteria has never been satisfactorily explained. For a long time it was thought to be in some way related to uterine disturbances. But while it is not denied that sexual disorders may have a bearing on the primal cause of the phenomena, still it is also claimed that the ailment attacks both sexes. We have progressed not further than this. The treatment at best has been attended in most cases with disappointing results. We are confronted with a "loss of due balance between certain of the high functions of the brain, spinal cord, and sympathetic system." The treatment obviously should be, then, to restore this balance. Rest is a very essential feature. By rest is meant restraint of overaction of certain of the spinal nerve-centers. My experience has taught me that nothing gives better results than the combined bromides, and these should be of the very purest obtainable. For this reason I have availed my professional self of Peacock's, not only for their purity—freedom from bromates and carbonates so common to the commercial bromides—but on account of their ideal synergic effects and the fact that they are neutral in reaction, which permits of combining certain alkaloids in the solution without fear or danger of precipitation.

In various forms of neurosis I have found Peacock's Bromides invaluable as an all-round agency of alleviation and cure. They have never disappointed me. In obstinate cases of epilepsy, where the treatment is necessarily protracted, I find them particularly useful in that their administration is not followed by the too common symptoms of bromism; and I would specially urge their utility in instances of delirium following alcoholic excesses. Any thing that conserves the vital forces, that does not depress any organ, as, for example, the cardiac center; any thing that gives the rest of normal sleep, when repair is greater than waste; any thing that tends to restore the nervous equilibrium, soothing the exciting centers, whatever and wherever they may be, must benefit the entire organism, when each separate organ then, of course, will receive its needful quota of help. And since local treatment is out of the question, I can not conceive of better procedure or one more infallible to the successful management of hysterical cases.

J. S. MURPHY, M. D.

Sullivan, Ind.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

TUMORS OF TESTICLE.*

BY JOHN R. WATHEN, A. B., M. D.

Professor of Pathology and Clinical Professor of Gynecology in Kentucky School of Medicine; Visiting Surgeon to Louisville City Hospital and Kentucky School of Medicine Hospital; Member Kentucky State Medical Society, Louisville Society of Medicine, and Louisville Clinical Society, etc.

In this paper I propose to discuss only the true tumors of the testicle, and will purposely omit any thing in connection with the inflammatory swellings whose relative proportion to the tumors is very large.

Bland Sutton says that the infrequency of tumors of the testicle stands in striking contrast to the frequency with which they occur in the ovary. I will omit any very elaborate classification of these tumors, as such is only arbitrary and often confusing.

Considering them from a surgical standpoint, we are most interested in whether they are of a benign or malignant type, and the resultant prognosis.

The malignant tumors are the carcinomata and the sarcomata, although many other tumors have been considered malignant, especially in connection with the testicle, because they are prone to degenerate from a simple or benign tumor into a malignant, as a fibroma into a sarcoma, following its prototype of tissue origin, as in this case both from the connective tissue or mesoblastic layer.

Carcinoma. As regards the frequency of this kind of tumor, all our best authorities differ as to their experiences and statistics.

* Read before the Louisville Society of Medicine, Louisville, Ky.

Senn, in his work on tumors, claims that carcinoma, as compared with sarcoma, of the testicle is an exceedingly rare affection; White and Martin claim it is the most frequent tumor of the testicle; while the American Text-book on Genito-Urinary Diseases assumes a position between and claims it is not a rare tumor. Foreign surgeons, as Von Bergmann, Treves, Esmarch, Sutton, Von Langenbeck, and others, differ as widely in their views. As to the etiology of cancer of the testicle, it, of course, has the same theories of origin as tumors elsewhere; some claiming they originate from an unutilized remnant or matrix of embryonal cells of congenital or post-natal origin, others from bacteria, enzymes, trauma, irritants, etc.

Probably trauma deserves more consideration in tumors of the testicle than elsewhere, as so many surgeons have laid stress upon it, influenced by a large clinical experience. Coley, of New York, claims that nearly thirty per cent of sarcomata can be traced to trauma. Sometimes it takes its origin from a benign tumor or inflammatory affection, as in a tuberculous testicle, contrary to the old view that tuberculosis and carcinoma exclude each other. Often there is no doubt that a tubercular epididymitis was the primary and carcinoma the secondary affection. Soft and hard carcinoma have been observed by different authors, some having seen only one and some the other variety, but the most common seems to be the soft or medullary.

Langhans claims to have noted a transformation of an adenoma into a carcinoma in the testicle. Cancer is quite common in undescended testicles, probably because these are so frequently subjected to repeated slight injury.

Gonorrhea, syphilis, epididymitis, and other inflammations may act as predisposing causes. In thirty-seven cases collected by Kocher, carcinoma was found in twenty-nine between the ages of twenty and forty years, and in about one fourth of the cases the disease followed trauma.

He claims that cancer usually begins in the center of the testicle, though it may originate elsewhere and invade surrounding structures. The cells develop first in the convoluted tubes from a proliferation of the seminal cells. The tubes nearest the center of the organ are usually the first affected, the upper portion of the testicle remaining intact or being involved later in the disease.

In many cases of cancer of the testicle there are a large number of cysts (cysto-carcinoma); eventually metastatic deposits occur in the liver

and lungs, and with the extension of the disease cachexia becomes marked. Carcinoma and sarcoma both ultimately extend along the cord; the carcinoma usually follows the lymphatics, while the sarcoma extends by the blood-vessels in the process of infiltration of surrounding tissues. The hard or scirrhus cancer rarely reaches the size of the human fist, while the soft may attain much larger proportions. Hydrocele often accompanies both carcinomata and sarcomata. Pain in the testicle is sometimes wanting, while at other times it may be prominent or severe. The skin becomes adherent sooner in carcinoma than sarcoma.

From a diagnostic point of view it is important to remember that tuberculosis almost always begins in the epididymis and carcinoma in the testicle proper. Many authorities claim we can not distinguish carcinoma from sarcoma or cystoma without an operation. Hematocele and hydrocele can usually be diagnosticated from malignancy if they are uncomplicated.

Prognosis is, as in all other malignant tumors, bad, and early removal should be insisted upon. The prognosis is more favorable in the hard, dense tumor than in the soft variety. Paget says that the duration of life is on an average twenty-three months, patients living about six months after operation, since, as a rule, they do not consent to surgical intervention until after they have suffered from the disease for one and a half years. If the retro-peritoneal glands are involved, the prognosis is bad, and death is due to metastasis. The hard or scirrhus type is not so rapid, and one case is reported which survived fifteen years.

A number of cases of radical cure have been reported, and a case of sarcoma of the testicle I operated upon last April is still living. This tumor was the largest sarcoma of the testicle I have found reported in literature.

Butlin sums up the operative prognosis thus: "Castration for malignant disease is an operation which may be performed with very small danger to life. There is evidence to show that the operation may be an excellent palliative measure, even if it fails in its primary object—the cure. There is comparatively little fear of recurrence *in situ* unless the cord is thickened or the scrotum adherent at the time of the castration."

Treatment should consist of complete castration and removal of the cord by laying open the inguinal canal and ligating at opening into

abdominal cavity, and then close the canal as in operation for hernia. The lymphatic glands in the surrounding structures should also be removed. I will not describe the technique of this operation, as each surgeon will vary his methods, sutures, etc., according as his experience has shown to give the best results.

Sarcoma. Surgeons differ in regard to the frequency of this tumor as they do in carcinoma, but Warren says the tendency of modern statistics is to show that it is the most prevalent. Virchow claims, as do a number of pathologists, that it is most common in children and old men, while the surgeons, on the other hand, contend it is oftenest from twenty to forty-five years. It has been seen in a child five years old, and in an adult seventy years.

Histologically considered, there are two forms of sarcoma of testicle—the spindle and the round-cell types. In spindle-cell variety the cut surface shows a firm growth of homogeneous appearance, with a few cysts in the substance of the tumor. The spindle cells are found lying between the seminal ducts, which are often quite well preserved. The round-cell sarcoma may be a large or small cell growth, and it may even contain giant cells. Alveolar sarcoma is not infrequently seen. Many of the small-cell sarcomata probably belong to the lymphosarcomata. It is this variety which is most liable to attack both testicles, and which is most malignant. Cartilage, muscle tissue, etc., are often found in sarcoma of testicle.

Round-cell variety is seen most often in children. The tumor is usually quite firm, and on section presents a yellowish or grayish red color. Pain is apt to be a more prominent feature in connection with sarcoma than with carcinoma. The prognosis is as bad, if not worse, in sarcoma, and its treatment should be the same as carcinoma, that is, complete extirpation.

Benign Tumors. Adenoma of the testicle has only been recently described. Eve has examined a large number of cysts, including adeno-cystoma, sarcomata, myxomata, and carcinomata, and found they were lined by columnar, stratified or ciliated epithelium; some were papillomatous, and cartilage and unstriated muscular fibers were occasionally present in the stroma.

Adenoma is characterized by the existence of numerous small cysts. If the tumor attains large size, it causes atrophy of the testicle by pressure. As there is much dispute at present in regard to the true pathology of adenoma of the testicle and cystoma, I will include adenoma under the head of cystoma and consider them as one.

Cystomata. Cystic tumors of the testicle are cysts which are developed independently of pre-existing glandular structures, in contradistinction to spermatocele, hydrocele, etc. The embryonic structures from which cysts of the epididymis originate are, according to Curling:

"1. From the paradidymis or organ of Giralde, a minute body, the remnant of the mesonephros or glandular portion of the Wolffian body. This is situated in front of the lower part of the vas and above the head of the epididymis, and behind the upper part of the tunica vaginalis. Cysts having this origin are situated above the testis and epididymis, and extend sometimes a little way along the cord. They correspond to the paroöphoritic cysts of the female. These cysts are composed of a connective-tissue sac lined with columnar ciliated epithelium, and are probably similar to the adult spermatic tubes, and in this way accounting for the fact that often these cysts contain spermatozoa. These tumors are mostly encapsulated, as are the broad-ligament, intra-ligamentous cysts in the female, and the capsule should not be mistaken for adhesions and torn, but opened and the cyst enucleated by stripping off the capsule. Often these cysts are multilocular.

"2. From the ducts of Kobelt, which are remnants of the tubules of the Wolffian body, situated in the globus major.

"3. From vestiges of the duct of Müller, part of which is represented by the hydatid of Morgagni, and another part of the duct can sometimes be traced from the globus major down to the globus minor along the body of the epididymis in the digital pouch. Cysts derived from these sources are situated between the epididymis and the testis, most frequently between the globus major and the upper end of the testis. The cysts which are derived from the vasa efferentia and other remnants of the Wolffian tubules are homologous with parovarian cysts in the female.

"4. From the vas aberrans of Haller, which is a diverticulum of, or a convoluted cecal tube opening into, the vas deferens close to the lower end of the epididymis; this also is a part of the remains of one of the tubes of the Wolffian body still in connection with the representative of the excretory duct of that body, namely, the vas deferens."

Dermoid Cysts. Most so-called dermoids of testicle are really not of testicle proper, but are upon the testicle or scrotum. Kocher reports only fourteen recorded in the literature. These tumors are not as common as those dermoids developing in or near the ovary, and they are congenital and probably originate from a misplaced matrix of

embryonal tissue. They may contain cartilage, teeth, bone, hair, etc.

In conclusion, I might apologize for not discussing some of the other benign tumors of the testicle, but as they are exceedingly rare and of little surgical value, I have purposely omitted their consideration.

LOUISVILLE.

FRACTURE OF THE NECK OF THE FEMUR.*

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Though occurring at all ages, this is essentially a lesion of middle age and advancing life, and I invite your attention and discussion particularly to fractures occurring at this time.

Before entering the subject proper, it may be well to glance at some of the normal anatomy of the joint and some of the conditions predisposing to fracture in elderly people.

The capsule of the joint is attached to the intertrochanteric lines, extending well down below, while above it is attached to the neck about half an inch internal to the greater trochanter; the synovial membrane does not follow the capsule closely, particularly above, where it is reflected early from capsule to neck of femur, thus leaving a space through which a fracture may occur, which, though intracapsular, would yet be extra-articular.

The periosteum on the upper surface of the neck is thick and vascular, and through it at this point run the blood-vessels supplying the narrow part of the neck and head of bone.

When we examine the structure of the upper end of the femur we find it to consist of a central soft, spongy part ensheathed in hard, cancellous structure, the cancellous structure of the upper part of neck extending out under the greater trochanter in an endeavor to reach the cortical structure of the shaft, so that we may consider the greater trochanter an apophysis attached to the neck of the bone.

The most important predisposing cause which renders the neck of the femur in elderly people liable to fracture is the rarefaction which occurs in advanced life; this consists of an absorption of the bony trabeculae and ensheathing callus, with a corresponding increase in

* Read before the Louisville Clinical Society.

medullary substance. The hard lamina extending from the upper surface of neck outward toward the outer side of shaft is often found completely absorbed.

It has been asserted by some that with advancing life there occurs a change in the angle between the neck and shaft, the angle approaching a right angle, but in an extended series of cases examined this was found not to be the case, the variation not averaging more than three degrees, which would certainly not account for the great frequency with which this fracture occurs at that period of life.

It has been customary to classify these fractures as intra- and extra-capsular; but this is far from being satisfactory, since it leaves a mixed class, those partly within and partly without the capsule, and because pathological conditions which, at the time the distinction was made, were believed to exist, are not always present; again, it is not always possible clinically to make a distinction between them, and even in those cases in which such a distinction can be made, it does not influence your prognosis or treatment.

The prognosis does not depend upon whether the fracture is intra- or extra-capsular, nor upon the presence or absence of impaction, but upon the continuity of the periosteum on the upper part of the neck, which carries the nutrient vessels to the head and narrow part of the neck of the bone. Upon the integrity of this membrane is dependent the viability of the upper fragment and its ability to undergo repair, and, where destroyed, non-union will in all probability result. The presence of impaction when not destroyed by rough handling adds greatly to a favorable prognosis, since the apposition of the fragments is satisfactory, and the viability of the upper fragment is reasonably insured.

The fracture may occur at any part of the neck. Those occurring at the base of the neck, the extra-capsular fractures, may extend along the intertrochanteric lines, completely separating the lesser trochanter from shaft, and may be completely extra-capsular, or partly within and partly without the capsule—the mixed variety. Where impaction is present it is usually in this variety, the neck being driven into the greater trochanter; impaction at this site differs from impaction seen in other bones, in being less firm and strong, due to the senile rarefaction present.

Fractures through the narrow part of the neck, the intra-capsular variety, are rarely impacted, the capsule often remaining intact, in

which case the primary shortening may be slight. The deformity is usually an angular one, the angle usually being directed forward, in which cases eversion is generally present, while in those in which the angular deformity is backward we may have inversion of the leg instead of eversion. Comminution is often seen, and may involve the entire neck and one or both trochanters.

In fractures of the base of the neck we may, with appropriate treatment, confidently expect union. In fractures of the narrow part of the neck many existing specimens demonstrate the ability of the upper fragment to undergo true bony repair, and this is made possible by the periosteum on the upper surface of neck, carrying the nutrient vessels, remaining intact. Other specimens show close fibrous union, the capsule of the joint becoming thickened and intimately adherent to the upper surface of the neck on either side of the fracture, thus obliterating the capsular cavity above and helping to sustain the weight of the body. Still other cases show no effort at repair, and often show a more or less complete absorption of the neck; a false joint between the fragments is occasionally seen, the upper fragment becoming hollowed out by rarefaction with eburnation of upper extremity of lower fragment. In other cases, where true bony union has not occurred, there has been a marked production of new bone, possibly with more or less ossification of surrounding ligaments, so that the bony points interlock with each other and are enabled to support the weight of the trunk. Impacted fractures as a rule unite readily; unimpacted may or may not unite.

The direct cause is usually a fall, the fracture being secondary to the fall; in some cases the fracture precedes the fall, being due to force exerted through the ligaments by a sudden twist or turn. The very small amount of violence required in some cases to produce a fracture would indicate that the osteoporotic or softening process had practically destroyed the bone at that point.

The symptoms when clearly marked are distinctive and leave no chance for error. There is loss of function of leg, which may or may not be complete; pain at site of fracture, and when not continually present, can be elicited by point pressure. The position and appearance of limb when well marked are characteristic, and at once impress us with the fact that our patient has sustained a serious injury.

The leg is everted to a greater or less degree and shortened; the shortening may be slight at first, becoming more marked in the course

of twenty-four to sixty hours, ranging from one half to three inches. The shortening can be determined by several methods: One is to place the patient perfectly straight in bed and measure from the anterior superior spines to the external malleoli and compare. Another and possibly better is Bryant's triangle: dropping lines vertically from the anterior superior spines and determining the relation of the top of the greater trochanter to them, it will be found closer on the injured than on the uninjured side. Still another method is to determine the relation of the greater trochanter to Nelaton's line, a line drawn from the anterior superior spines to the tuberosity of the ischium and normally passing over the top of the greater trochanter.

Crepitus may or may not be present, and is certainly not to be studiously sought for, since by our manipulations we may break up an existing impaction or tear completely through the periosteum, and thus place our patient under most unfavorable conditions for obtaining union. The same may be said of abnormal mobility—do not look for it.

Another symptom which many text-books give is rotation of the trochanter around a smaller axis. Theoretically this is all right, but practically it is of no value; in doubtful cases the muscular structures surrounding the joint prevent its recognition, while in cases where it can be recognized the other symptoms are so distinctive as to render its detection unnecessary.

Fullness in Scarpa's triangle is noted in many cases, and is an important symptom. Given the history of a fall, followed by loss of function and pain and the symptoms above mentioned, the diagnosis is not for an instant in doubt—we surely have a fracture. We need no anesthetic; in fact, the general condition of many of these elderly patients absolutely contraindicates its administration, but when given, our manipulations should be as gentle as possible, to avoid doing further injury.

But there is another class of cases, where we are called to see an elderly person who has made a misstep, possibly sustained a fall, suffering pain, but the loss of function not complete, only partial; there is apparently little or no eversion and shortening, no crepitus; in short, no absolute sign of fracture. Here the temptation to conclude that the case is one of sprain or contusion is great, and the warning of Hodgson, emitted nearly a century ago, that in such cases we should strongly suspect the probability of fracture, has often been repeated; it is still at times disregarded, always to the great disadvantage of the

patient, and oftentimes of the doctor. These cases when treated as contusions are confined to bed for a few days, then urged to get up and go around, and there is either a gradual shortening or else the impaction is broken up, the fragments separated, capsule and periosteum ruptured, and our patient's condition as regards the probability of union is changed from one of hope to one of despair. Unless demonstrated by the X-rays to be merely contusions, such cases should always be treated as fractures; the confinement under appropriate treatment can do no possible harm, and it is certainly a small price to pay for the avoidance of the grave risks incurred by allowing our patient the privilege of locomotion.

The ideal objects of treatment, restoration of form and function, are not to be expected; in fact, are not always to be sought. We expect deformity in the shape of slight shortening and eversion, but these are not incompatible with a good functional result. The destruction of the softened bone at site of fracture will prevent union without deformity, while the proximity of the joint, or probably its implication, will insure an impairment of its function, and this is particularly true of rheumatic patients. The first indication is to save life; this accomplished, then if possible to secure union. The injury is often so severe as to produce death from the overwhelming mental and physical shock. In other cases the reaction to the injury is severe, the temperature rises, the patient becomes delirious, and dies in a week or ten days from exhaustion, probably with an intercurrent pneumonia. In a third class of cases the strength rapidly fails during the second or third week, the patient becomes comatose or delirious, and dies from exhaustion. It has been suggested that fat embolism plays an important part in this latter class.

In those cases in which the deformity is only slight, the dressing can be applied at once; where the deformity is marked, the administration of an anesthetic is permissible to allow its reduction. To maintain the reduction many methods have been advocated, the most practical of which is the continuous traction method. The patient is placed on a hard mattress with boards placed transversely under it to prevent its sagging, and either Buck's extension or Hodgen's suspended splint is applied; the former is in most common use, although the latter permits greater freedom of movement. Buck's extension is applied by taking a long strip of adhesive, starting it just below the greater trochanter and carrying it down the outer side of leg and up the inner side well

above the knee, leaving a loop under sole of foot; a roller bandage is then applied to hold this in place; the leg is next placed in proper position and so held by sandbags extending on either side from trunk to heel; the foot of the bed is raised eight or ten inches; a small wooden splint is then placed under the foot to prevent undue pressure on the malleoli, and to it is attached a weight of from five to ten pounds; the patient is to be given appetizing foods, alcohol in moderate amount, particularly where accustomed to its use; the back is to be given careful attention, washing with soap and water, rubbing with alcohol, and dusting with zinc oxide; after a week raise the body by means of pillows or a head rest; the traction can be dispensed with after three or four weeks, and the patient moved from one room to another, keeping the surroundings as cheerful and bright as possible; after the ninth or tenth week some retentive apparatus can be applied, and the patient allowed to go about on crutches, not bearing any weight upon the injured leg, however, until after the fourteenth or fifteenth week. Such would be the ideal treatment, but we are often compelled to modify or even abandon it altogether in order to meet the primary indication of saving life. In these unfortunate cases we may have to let the fracture entirely alone, get our patient up in an arm chair, secure change of position and surroundings, in fact, devote our entire time to the preservation of the vital processes.

Plaster of Paris casts have been advocated by some for the treatment of this fracture, but the rigid confinement which it enforces is not at all well borne by elderly patients.

Nailing the fragments together has been practiced by a few, but on account of the disastrous consequences which would follow the establishment of infection and the fact that the softened bone does not afford a good hold for the nail, their example would hardly be a good one to follow.

Possibly the best splint yet devised is one on the order of 'Thomas', which combines pressure on the great trochanter with traction, and yet is not so cumbersome or rigid as to enforce absolute confinement. With such a splint as this, one which permits traction and holds the fragments in apposition by direct pressure on the trochanter, if it be well borne by patient, we should be able to improve our results, which, under present treatment, we must confess are oftentimes discouraging.*

*I have quoted freely from Scudder, Stinson, and Mudd in the preparation of the above.

Discussion. Dr. Satterwhite said that severe manipulation was certainly to be avoided in cases of fracture of the neck of the femur, and cited a case in which severe manipulation had produced disastrous results.

Dr. Cheatham mentioned a case of fracture of the neck, in which the surgeon had made a mistake in supposing that there was no fracture, but the marked shortening of the limb after recovery proved positively that a fracture had existed.

Dr. Weidner spoke of a case that he had seen, and said that he thought confinement to the recumbent position in these cases was dangerous, as it was liable to produce pneumonia.

Dr. Irwin reported a case in the person of a woman, seventy-two years old, who had suffered from fracture of the neck of the femur, and who had Bright's disease, but made a recovery sufficient to enable her to walk. He also reported another case in an aged man, where the bladder was involved in some way, and large quantities of pus were discharged through the bladder. The discharge of pus was materially lessened, but never entirely checked. The patient finally died. He reported two other cases in which tuberculosis was developed. Shortening occurred in all the cases that he had seen.

Dr. J. R. Wathen said that the essayist had not mentioned the Senn treatment, and that Dr. Senn claimed a great deal for the particular way in which he managed such cases. He was sure that shock was a dangerous thing in connection with all cases of fracture of the neck of the femur in old people. They seemed to die from shock in this injury when it ought not to be expected.

Dr. Turner said that the X-ray should be used more frequently. He had treated a case with permanent dressings, in which he procured good results.

Dr. Marshall approved the permanent dressing, and thought that extension should be avoided in impaction.

Dr. Coomes reported a case in which a fracture of the neck had been diagnosed and dressed by two surgeons. The case passed under the care of two other surgeons, who removed the dressings and declared that there was no fracture. The patient recovered with marked shortening, showing that there had been a fracture.

Dr. Abell, in closing the discussion, said that the Senn method was not used by any one but Dr. Senn; thought it was difficult to apply. He did not think that ten pounds weight would do more than overcome

the muscular contractions, and was therefore not dangerous or harmful in any way. He reported a case of fracture through the narrow part of the neck, intra-capsular fracture, in which true bony union had occurred. The patient had died suddenly during his convalescence, and a post-mortem showed that true bony union had taken place.

LOUISVILLE.

THE CORRECTION OF DEVIATIONS OF THE CARTILAGINOUS NASAL SEPTUM.*

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The septal cartilage is a quadrilateral body articulating anteriorly with the nasal bone and with the upper and lower lateral cartilages of the nose. Its posterior margin articulates with the perpendicular plate of the ethmoid, and its inferior margin with the vomer and with a ridge formed by the union of the palatine processes of the superior maxilla. In its normal condition and position it divides the nasal cavity into two symmetrical and parallel chambers. Deviations and deformities of the cartilaginous septum are exceedingly common. According to statistics gathered by various authors, septal deviations are the rule in all civilized races. Stoker even goes so far as to say that "no such thing as a perfectly straight septum exists among civilized people." Among the chief causes assigned for the frequency of these deviations are racial proclivities and trauma. The commonness of the affection among Europeans and Americans is ascribed, first, to the increased cranial development and the consequent change in the facial angle; second, to the admixture of different races. Trauma is undoubtedly the cause of a large per cent of septal deviations. Blows and falls upon the nose received in early life and given but little consideration at the time may be followed by nutritive changes in the cartilaginous structure of the nose, and later in life develop either deviation or thickening. Marked deviation of the septum is rare in childhood. In two hundred operative cases reported by Mayer, only nine were under ten years of age. Fortunately all cases of deviated septa do not give rise to symptoms or produce sufficient inconvenience to call for treatment. Many persons go through life with no symptoms referable to the nasal passages whose septa exhibit marked deviation. It is scarcely

* Read before the Louisville Medico-Chirurgical Society, January 18, 1901. For discussion see p. 183.

necessary to add that unless the deformity produces symptoms, it should not be treated. Beaman Douglas states that the records of the Manhattan Eye and Ear Hospital show that eleven per cent of all the nasal cases applying to that institution for treatment were suffering from symptoms referable to deviated septa. The principal subjective symptoms in connection with septal deviation are affections of the voice, the talking through the nose, as it is called, being one of the most constant and annoying symptoms both to the patient and his friends, obstructed nasal respiration, mouth-breathing, hypersecretion of mucus, defective nasal drainage, headaches, loss of smell, reflex nervous symptoms, and acute and chronic diseases of the middle ear. As a rule all cases persistently presenting any of the above-named symptoms demand a correction of the deformity; the treatment of this condition is entirely surgical. It is not necessary at this time to even attempt a description of the many operations that have been devised for the correction of this deformity. In 1890, Dr. Morris J. Asch, of New York, read a paper before the American Laryngological Society entitled "A New Operation for Deviated Cartilaginous Septa," in which he reported six successful cases, having performed his first operation by this method in 1882. The instruments and the operation are described by Dr. Asch as follows:

"The instruments required for the operation consist of a cutting forceps, compressing forceps, blunt and sharp separators to break up any adhesions which may exist between the convex portion of the deviated septum and the inferior turbinated body, and tubular nasal splints made of hard rubber. The cutting forceps or scissors are made in two sizes. They are powerful instruments curving outward from the point of junction and meeting again in front. One blade is blunt and narrow for introduction into the stenosed nostril, while the other is sharp with a triangular blade. Other scissors are made with the blade bent at a right angle, for use in deviation requiring an incision running downward. The compressing forceps used for straightening up the septum after incision are of two sizes, with long and short blades respectively. The splints are curved, hollow tubes made of vulcanite with perforations to prevent them from slipping. These tubes first made for me by Tiemann & Company were oval in shape; later on, at the suggestion of Dr. Emil Mayer, they were flattened on the sides, and this shape I prefer as a rule to the original. An atomizer containing Dobell's solution is kept in a bowl of ice to check any hemorrhage. The operation

is performed under complete anesthesia of chloroform, ether, or Schleich's mixture, which has given good results in these cases. All the instruments are to be carefully sterilized, and the nose washed out with an antiseptic spray before operating. The head of the patient being drawn backward over the edge of the table so that the blood will not enter the larynx, and the nostril illuminated either by direct or artificial light, the blunt separator is introduced into the deviated side so as to break up any adhesions that may exist, and to ascertain the presence of any bony obstruction posteriorly. The scissors are now introduced parallel to the floor of the nose, the sharp blade being in the concavity and the blunt one over the line of the greatest convexity of the deviation. It is important that the blades should be at right angle to the septum at the place of incision, otherwise the blades may override and the scissors fail to cut through. The blades being firmly closed, the sharp one cuts through the cartilage into the opposite side with a distinct snap. The scissors are then opened and withdrawn. They are immediately reintroduced in the same manner as before, with the blades pointing this time in a vertical direction crossing the line of the first incision as near as possible at right angle and at its center. The scissors are now closed and the second incision made, after which the scissors are opened and withdrawn. We have thus four segments as the result of the crucial incision. The operator now introduces his finger into the stenosed nostril, forcibly pushes the segments into the concavity of the opposite side, effectually breaking them at their base. The finger should be pushed through. This part of the procedure must be done thoroughly and carefully, for on it depends the success of the operation. If the segments are thoroughly broken at their bases the resiliency of the cartilage is destroyed and the deviation can not recur. The compressing forceps are now introduced, one blade in each nostril, and the septum compressed in order to straighten it still further and to force the broken segments to more completely override each other. The iced Dobell's solution is now sprayed into the nostril in order to check the bleeding, and the sterilized tubes introduced, a snugly fitting one into the side previously stenosed and a smaller one into the opposite side. These serve to prevent hemorrhage and to hold the septum in its new position. This completes the operation, which, in experienced hands, should not occupy over five minutes."

The operation as described above by its originator met with immediate favor by the profession, and is now, on account of the simplicity

of its technique, its uniformly successful results, the ease and rapidity with which it can be performed, and its freedom from danger, preferred by the majority of operators in this line of work. Personally I have never been partial to the septal scissors as used by Dr. Asch in making the crucial incision. I have usually found it necessary to extend the incision as made by the scissors by probe-pointed bistoury, in order to divide the cartilage to its margin. More recently I have been using a septum knife designed after what is known as the "Beaman Douglas knife." The short double-edged blade sets at right angle to the handle, and cuts with equal facility either to or from the operator. With this knife in the stenosed side and the finger in the unobstructed nostril, it is easy to carry the incision along the line of the greatest convexity. After completing the horizontal incision, the vertical one can be made with the same knife before withdrawing it from the nose. With this knife the lines of either incision can be varied at the will of the operator. The operation can be performed as quickly as with the scissors. After the completion of the incision, the finger should be introduced into the stenosed nostril and each of the segments pushed through to the unobstructed side. Sufficient force should be used to completely destroy the resiliency of each fragment. After this the compressing forceps may be introduced in order to press the fragments into position and cause their margins to override each other. In my first operation I relied too much on the forceps and too little on the finger to destroy the resiliency of the septal segments. I believe that most cases could be successfully corrected without using the forceps at all. I have not found it necessary to use either the cold spray or other styptics in order to control the hemorrhage. While the bleeding is, as a rule, rather profuse after the incision, I have never had it to continue after the insertion of the tubes. In all my cases I have used the perforated vulcanite splints commonly known as the "Mayer hollow splint." I have had no experience either with the malleable or with the non-perforated splints. It is surprising how little reaction follows this rather extensive operation. Unless the mistake is made of using too large a splint, the patient is entirely comfortable within twenty-four hours, and as a rule is able to return to his ordinary vocation after the third or fourth day. The tube may be removed from the unobstructed nostril after the second or third day. The one in the obstructed nostril should be removed and cleansed daily for the first week; after this time the patient can remove and reinsert the tube himself. In order to insure a

permanent result, the tube should be worn from four to five weeks. A properly fitting tube gives the patient no inconvenience and is not noticeable. In 1898 Dr. Emil Mayer published a report of two hundred cases without a single failure. His report shows that in eighty-five per cent the septum was perfectly straight. In the remainder the curvature was not sufficient to cause any stenosis or discomfort. Perforation of the septum occurred in about two per cent of the cases. These perforations were small and gave rise to no inconvenience. There was no alarming hemorrhage, neither primary nor secondary. Notwithstanding these operations were mostly performed on dispensary patients, no septic conditions resulted. In a paper published in 1899, Dr. Asch says that "in over three hundred and fifty operations coming under my personal observation within the past ten years, not a single death occurred, and in only a few badly nourished, cachectic patients were perforations observed."

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, January 18, 1901, Louis Frank, M. D., President, in the Chair.

Brief Report of a Few Surgical Cases. Dr. William Cheatham: The first case is one that Dr. Evans saw for me during my absence from the city, and was present later when the patient was operated upon. The case was one of mastoid disease in a man seventy-nine years of age; the whole mastoid was involved. No trouble was experienced in the operation; in using a chisel the bone came away in masses. We cleaned out the mastoid thoroughly and the man made a good recovery, except the formation of an abscess separated some distance from the other wound. It seemed to be a metastatic collection of pus; a periosteal abscess; it was opened after he left here. He came into my office the other day, having entirely recovered and looking remarkably well. His age is the especially interesting point in the case.

I have had a good many cases of foreign body in the esophagus and about the eye lobes. One was a foreign body in the esophagus, a woman over seventy years of age, who had swallowed a chicken bone. It had been there four or five weeks when I saw her. Her breathing

*Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

had become very difficult, which brought her to me. There was considerable edema about the upper part of the larynx, over the arytenoids, etc. The chink was rather small. I inserted a horsehair bougie, and at the first attempt brought out half a chicken's wishbone. I was surprised to get it the first trial. She went home and had no further trouble; the inflammation subsided quickly, and it was reported to me a few days later that she was all right.

Yesterday I had a case of foreign body in the eye, a briar. Some children had been going to school; one of them held a berry bush while the others were passing, and, letting the bush loose, it struck a child in the eye, driving the briar into the cornea obliquely, and I had some little difficulty in getting it out. The child was brought to me soon after the injury, which made extraction of the foreign body easier than if it had remained longer until the wood had become softened. With a cataract knife I dissected around the foreign body until it could be grasped with forceps and removed. The child is now all right.

To-day a boy was brought to my office who had been shot in the eye with what is known as a BB air-gun. The shot struck him in the left eye, producing an ugly corneal wound. It was done a week ago; the boy did not have a perception of light in that eye; the anterior and vitreous chambers were filled with blood; about one third of the iris was torn loose on the temporal side. I put him on the hot-water bath; calomel purge; sulphate of atropia locally.

Discussion. Dr. T. C. Evans: In regard to the first case, I am glad to hear the old gentleman has made a good recovery. I had him under observation a few days during Dr. Cheatham's absence in the East. This condition had existed for almost a year; he stated that he first had some middle-ear trouble following the grip. He was very much depressed, and I remarked at the time Dr. Cheatham operated that the circulation was very bad. I have never seen a mastoid operation where there was as little bleeding as in this case. Dr. Cheatham did not attempt to do a radical operation, because he was afraid the patient would not withstand the shock. He took chloroform badly. One symptom Dr. Cheatham did not mention coming on after the operation was the man's mental faculties became very much clouded, which caused some alarm.

Dr. J. M. Ray: There is quite a discussion going on now as exactly how to manage mastoid cases. Whether in acute mastoid inflamma-

tion it is best at once to go into the attic, or whether to trace up the sinus and clean it out, and drain the attic with a small opening. Politzer advises against direct antrum opening in acute otitis media. He advocates finding the tract and following it up. Other authorities advocate opening the antrum at once, and if tracts are found, to follow and clean them out thoroughly. Jansen, of Berlin, cleans out every thing. In a number of instances I saw the facial muscles twitch because he had touched the nerve.

I was particularly interested in the case of foreign body in the esophagus. I have seen these cases, and have had a rather peculiar experience. Several years ago I saw a lady from Owensboro, in consultation with Dr. Yandell. She was a school teacher, and came with the history that six weeks before she had swallowed the breast bone of a quail; for a long time her throat was sore, she could feel something, and her doctor had passed a whalebone bougie without getting any thing, and apparently relieving her. Up to a few days before she came here she was able to swallow; some soreness about the throat, but she was able to take plenty of nourishment. Then her throat and neck began to take on an active inflammatory process; her neck was swollen and stiff; she had a peculiar voice, but breathed without any difficulty. When I looked into her throat it appeared that the whole back wall of the pharynx was pushed forward; with my finger pushed well down, fluctuation was plainly evident. I made a small incision and liberated a quantity of foul-smelling pus. In a few days the inflammation of the neck all disappeared; we did not find the foreign body. The question is whether this post-pharyngeal abscess was not the result of traumatism from introducing the whalebone bougie.

The second case was not exactly one of foreign body in the esophagus. A boy was brought to me from Shelby County, Kentucky. The history was that the child was in a swing with a pin in its mouth; it fell out and swallowed the pin, which lodged in the throat. I looked into and found the pin crosswise; one end was buried in the base of the epiglottis, the other was buried in the back wall of the pharynx. It could not be determined which was the head and which was the point. I wanted to get the pin without lacerating the tissues more than could possibly be avoided. After working some time without making any progress I decided to remove the pin the best way I could, which was to grasp it with forceps and pull it out. This was done by bending the pin. Two weeks later I heard that the child was in bad

condition; that there was evidently something wrong. The neck was swollen and infiltrated. When he was again brought here there was difficulty in breathing; could not swallow, and the neck was stiff. Examination showed the presence of a large post-pharyngeal abscess, which was opened and a quantity of pus liberated. Dr. Cecil will remember two cases that we saw in children coming from the nasopharynx. In these the abscess was higher. In the cases reported to-night the abscess was low; the protrusion or tendency to point, as it were, was on a level with the larynx. There was considerable difficulty in deglutition in both cases.

The third case was seen recently. A woman came to me with the statement that in the latter part of August, 1900, she had swallowed a bone; that she had gone to a neighboring doctor, who had tried to get it out; that he had passed a whalebone bougie; that ever since her throat had been sore, and there was a constant sensation as if there was something in it. When I saw her in October there was a brawny infiltration of all the tissues of the neck in front. She had a peculiar kind of voice, like she did not move the larynx freely. I could not discover any swelling in the post-pharyngeal space, and told her I did not consider it wise to use a bougie at that late day to find the foreign body. She went home, and I told her to let me know if any further trouble occurred. I have heard nothing more from her, so do not know exactly how the case terminated.

In regard to the foreign body in the eye, these air-guns are dangerous things in the hands of children. I had such a case recently, in which a child lost one eye. The child was brought to my office with an enormous laceration involving one third of the sclero-corneal margin, with every thing protruding through the wound. This boy was playing in the back yard while some other boys were shooting sparrows in the alley, when the accident occurred. The eyeball was practically emptied of its contents and filled with blood. There was nothing to do but to take out what was left of the collapsed eyeball.

Dr. Louis Frank: Might not these abscesses have been produced by abrasion from the foreign body as it was carried in rather than by the bougie?

Dr. William Cheatham: Dr. Evans calls my attention to a few things that I overlooked in making my report. There was a sinus left in the old man's case, the bottom, which I did not reach on account of his taking chloroform so badly. Afterward, under orthoform and

cocaine, this was thoroughly cleaned out. I operated twice or three times afterward with orthoform and cocaine, without general anesthesia, and the old man has gotten completely well.

Some time ago a gentleman swallowed a bone, as he thought, and sent for four or five doctors in a hurry. I used a horsehair bougie and removed the entire breast bone of a quail in the first attempt. I have had a good many cases of this kind where the horsehair bougie has served me well.

I had a peculiar case of injury to the eye the other day in a man working at the Chess & Wymond Cooperage Factory. He was operator of a shaving machine used in making staves. A piece of shaving struck him in the eye, making as pretty a cataract incision as I ever saw. When he came to me he had some prolapse, with adhesion of the iris. I cleaned out the eye, put on a compress, gave him some atropine, resulting in a perfect pupil and a perfect eye.

I have had a great many cases of foreign bodies in the esophagus, and have always found that the horsehair bougie was a valuable instrument. I remember the case of a patient who had swallowed lye when a child, which had produced a stricture of the esophagus; in this case I believe the esophagoscope saved the performance of an esophagotomy. The boy had been eating plums, and it was thought a plum was engaged in the stricture. Not being able to afford relief, it had been about decided to perform an esophagotomy. I introduced the esophagoscope and had no trouble in demonstrating that there was no foreign body in the esophagus. While the patient was under chloroform I put him in the exaggerated tracheotomy position and used the esophagoscope, and could see the stricture distinctly.

Spasmodic Stricture of the Esophagus: Gall-Stones. Dr. B. C. Frazier: About two and a half years ago I was called to see a lady, aged fifty-six years, the message being that she was choking; that just after eating supper she began to choke; became very much frightened. I was asked to see her, although I was not at that time the family physician. She tried to swallow some water, but insisted that she could not do so. I returned to my office for a stomach-tube, and, after inserting it, could feel no foreign body. I could feel, however, a distinct resistance to the entrance of the stomach-tube. If there was present a foreign body it was pushed on down into the stomach. The same thing occurred again in the same patient after the expiration of four or five weeks; and later, while she was in Denver, Col., she had a

similar attack, which was relieved without any treatment. Almost immediately after her return to this city, eight weeks ago, she had an attack of what I took to be gall-stone colic. Morphine was necessary for relief of pain, and she was sick a number of days. In about five weeks after that she had another attack, in which morphine was also necessary. After this second attack, upon examination I discovered a tumor half the size of a cocoanut in the abdomen much lower than the gall-bladder would be found ordinarily, but nearly on the same line, probably a little further toward the spine of the ilium, and she told me that she had observed this herself several weeks previously. Her abdomen had been tender for some time, and there was the discharge of considerable gas. She recovered from this attack and went along for a week or ten days with extreme soreness over the bowels, passing large quantities of black, tarry-like material, with considerable mucus. No gall-stones were found in the excreta; constipation was present at intervals; very little jaundice; tongue furred.

In about three weeks after the first attack she had a second attack, and after the second attack I called in a surgeon, who was very much inclined to think it was not gall-stone colic, but did not give any decided opinion as to what it was, or as to the prognosis. He thought because of the woman's age and her condition that it was not advisable to do even an exploratory operation. She has been thoroughly purged, and is still passing this thick, tarry-like material; no gall-stones can be found, and I have examined many of the stools personally. She still has the tumor, and still has considerable discomfort about the stomach and abdomen. She has had no appetite, no fever except during the first attack, which I attributed to the grip.

Whether or not she has a distended gall-bladder, with stones that have not come away, or whether or not she has a tumor connected with the gall-bladder, or whether she has a tumor in the abdomen not in any way connected with the gall-bladder, is a question which seems hard to determine. My own opinion is that she has a distended gall-bladder, and she probably has some stones engaged in the gall-bladder that have caused some obstruction, and afterward, by the relaxation of the morphine, the mucus, etc., passed away, and the stones are still there. She is very tender, and the more or less collapsed tumor can be distinctly outlined.

The question came up whether this might be malignant, and whether or not the choking sensations she has experienced might not

also be caused by malignancy. It has now been two and a half years since the first attack of choking and she has kept her usual flesh, and has been in as good condition the last six months while in Denver as ever in her life.

Discussion. Dr. J. G. Cecil: With reference to the first part of Dr. Frazier's report of the case of esophageal spasm, it recalls to mind a case of similar character which came under my observation in the person of an old gentleman. Several times I saw him with a purely spasmodic stricture of the esophagus; during these attacks the mere attempt to swallow any thing would bring on such a spasm that nothing could be swallowed. Any of the anti-spasmodics would relieve him, and by the next day he would be all right again. I think possibly there was an element of this character in the case reported by Dr. Frazier. There is no reason why we might not have a purely functional spasm of the esophagus, the same as we have spasms of any other hollow viscus.

Dr. William Cheatham: My experience is that spasmodic stricture of the esophagus is not very unusual. I have had several such cases come to the office, and have relieved them with cocaine or orthoform. Often the patient may be relieved by allowing him to sip a weak solution of cocaine. Sometimes relief follows the sipping of ice-water or the introduction of the cold bougie. In the case reported I do not believe there existed a foreign body in the esophagus; I believe it was purely a spasmodic condition. I do not see any thing in the report of the case to indicate the presence of malignancy.

The essay of the evening, "Correction of Deviations of the Cartilaginous Septum," was read by Thomas C. Evans, M. D. [See page 173.]

Discussion. Dr. William Cheatham: Dr. Evans has given us a very excellent paper upon this subject. I do not know whether he spoke of laryngeal complications as a result of nasal stenosis or not; they are very common. I find that in some of these cases the Asch operation does not relieve them. There is often a great deal of redundant tissue, and the septum is curved so on itself that we can not get it in place by the Asch operation. We have to punch some of the cartilage or make a furrowed incision separating the cartilage well, allowing the two pieces to slide up on themselves, and remove the redundancy afterward. It is an operation that gives wonderful results.

One of the most common causes of nasal stenosis is deviated septum. I have never seen much sepsis following an operation of this kind, but have seen a great deal of sepsis following the use of the cautery.

Dr. J. M. Ray: There have been as many different operations advised to correct twisted nasal septa as there have operations for the radical cure of hernia, which shows that none of them will fit every case. We have to use our ingenuity, as it were, and resort to that operation which is most suitable to the individual case.

I have done several Asch operations, and have had perforations afterward. I have met with the same difficulty that Dr. Cheatham mentions. I operated on a young man who had a badly deviated nasal septum, but I could not get it straight and at the same time get the flaps in position. One flap would override the other, and later I had to cocaine the nose and with a knife trim away the redundancy in order to get a good result. It is a pretty formidable operation; hemorrhage is usually quite severe at first, but introduction of the tube readily controls the bleeding. The trouble I have had has been with the after-treatment. Pressure of the tube in the nose worn for a while produces a certain amount of erosion, and there is considerable pain in taking out and inserting the tube; pressure of the free end of the tube against the vestibule of the nose will produce erosions, which makes it very painful to take out and introduce the tube; for that reason patients complain bitterly during removal of the tube. This operation appeals to me at the present time because I have recently seen a case, a young lady, who presented herself to me four or five years ago with one nostril obstructed from a deviated septum; under cocaine I trimmed off a large mass of redundant tissue and she was improved for a while; she could breathe through that nostril. Summer time came on and she had hay fever, or edematous rhinitis, and ever since then she occasionally has an attack of edematous rhinitis in which she suffers considerably. I treated her without any especial benefit, until I told her father I did not see any thing to do unless some operation to change the position of the septum was undertaken. I told him it was an operation in which an anesthetic must be used, and in which there was considerable discomfort in the after-treatment. As a result he sought other counsel, and later went to New York. He came to my office a few days ago and brought me a letter written by a New York surgeon, in which it was claimed that by the Asch operation he could bring about complete relief of all the symptoms. There is not now a very

great deviation of the septum, but the surgeon spoke very positively of the relief that would follow the Asch operation. I could not think of undertaking the operation under the circumstances and offer absolute relief. The father now wants to bring the young lady back here and have me operate upon her. In a nervous young person, as in her case, where the tube has to be worn five or six weeks, I will be almost sure to have trouble if I agree to do the operation.

There is an operation that I have looked upon with a great deal of favor, and that is what is known as the Gleason operation, in which an incision is made around the deviation, which is then pushed over in the opposite nostril; a tube is worn for a while, then the redundant tissue trimmed away. It is an operation that can be performed under local anesthesia, and I believe in deviations involving only a portion of the cartilaginous septum the Gleason is preferable to the more formidable Asch operation.

Dr. T. C. Evans: I want to say, in closing the discussion, that I have operated on fifteen cases of deviated septa by the Asch operation, and have had only one with a perforation that persisted. This was a patient operated upon at the clinic about a year ago; I saw him only last week, and he now has a considerable perforation, although the septum is perfectly straight. The perforation seems to have given him no trouble whatever. In this case I did a second operation. In the first operation I did not succeed in breaking down the resiliency of the septal wall, and wearing the tube gave him a great deal of pain. The chief point in the operation is to be sure the resiliency of the septum is entirely destroyed, otherwise you will have trouble from pressure of the tube.

I have not had the great amount of pain from wearing the tube mentioned by Dr. Ray; for the first few days patients sometime complain of pain about the vestibule.

In regard to the redundancy of the cartilage, this has happened in several of my cases, especially of the inferior fragment on the floor of the nose. The tube going partially above the lower fragment on the deviated side, left a spur on the septum that had to be removed later by the knife. In young people these excessive developments of the septum or spurs left there absorb rather readily, and in a year or two entirely disappear. I notice that several authors recommend the use of the galvano-cautery in reducing these redundancies. I have never tried this, because I have always been averse to the use of the cautery on cartilage.

In regard to hemorrhage, as I said in the paper I have never had any trouble from this source, though bleeding is sometimes quite profuse at the moment of incision. By breaking down the fragments quickly, by the time the tube is introduced the hemorrhage ceases. In some cases it is difficult to get the patient's consent to this operation, as they would prefer to go through life talking through the nose, etc., than to submit to a radical operation for correction of a deviated septum.

Fracture of the Skull: Operation: Recovery. Dr. Louis Frank: On January 14, 1901, I saw the patient from whom this specimen comes. A man, aged twenty-eight years, had a stellate laceration of the scalp situated about four and a half to five inches above the right ear, and about one and a half inches behind it. There was considerable hemorrhage and some brain matter coming from this wound.

Upon digital exploration it was found that he had a depressed, compound comminuted fracture of the skull which involved both tables, with considerable laceration of the brain tissue. There was a funnel-shaped depression at the point of injury which was shut off from the brain proper by the fragments of bone. My finger went down in this depression probably to the extent of one inch. The man was perfectly conscious, though he said he was unconscious for a few minutes immediately after he was struck. He regained consciousness in a short time, was able to be aroused, and was led to the office of Dr. Galvin, with whom I saw him. There was absolutely no paralysis, though I take it this wound was situated about the posterior region of the arm center, just behind the fissure of Sylvius. There was no inequality of the pupils, no dilatation, and both responded to light; he carried on a perfectly rational conversation, so there was no evidence of injury beyond the wound itself. There was, however, upon manipulation a little twitching about the left arm and left shoulder. There was no loss of sensation, no impairment of sensation anywhere; he was put upon his feet, led out to the carriage, and was sent to the infirmary. There was no shock whatsoever, no elevation of temperature, and his pulse at the time was 70. Temporary dressings were applied, and he was sent to the infirmary, where I made an incision extending from the angle of this Y-shaped wound, following the direction of the depression downward and forward, making a horse-shoe flap which was turned toward the anterior part of the head. This revealed an opening which

was almost completely circular, punched out, about one inch in diameter; the bone from this was entirely gone, and the wound was filled with dirt, hair, and brain substance itself. This was washed away and removed, and the fragments of bone which I exhibit were taken out. Some of these fragments were deeply imbedded in the brain structure.

After removing these fragments there was quite a sharp hemorrhage, which was controlled by packing, the finger being passed directly into the wound. We found that the laceration of the brain substance extended deeply. About two drachms of brain substance, by volume, came away and was lost. This was cleansed out by irrigation, also by the finger and by means of curved scissors used as a curette. The posterior fragments were still adherent at the outer table; these were cut away; the outer table was also cut away by means of the Rongeur forceps, bringing it to the size of the opening in the internal table.

The dura came back nicely to its place under hot irrigation, the wound in the dura being transverse and only slightly lacerated. The dura was closed with continuous catgut sutures, as was also the periosteum, and after the insertion of a gauze drain the external wound was closed by silkworm gut. The patient took chloroform well, and after the operation was completed his pulse was 64, temperature normal. He came out from under the influence of the chloroform perfectly without any symptoms.

The next morning his temperature was 99° F., pulse 70. Patient complained of a great deal of headache. No paralysis and no pupillary symptoms. Saline purge ordered, which acted well, and fifty grains of bromide of potassium given every four hours. He had a very comfortable day; temperature in the evening, 99.5° F., pulse 72.

On January 16th, two days after the injury, the patient's temperature was 100° F., pulse 76, and he complained of headache. Dressings were changed and gauze drain removed; there was considerable bloody fluid discharged from the wound. Dry dressings applied and bromide continued.

January 17th, temperature and pulse normal. Patient stated that he felt well.

January 18th (to-day) the dressings were again changed; there was still discharge of pale bloody fluid; pulse normal; saline ordered, and as there is no more headache, bromide is discontinued. Patient

expressed himself as feeling all right and able to be up; is allowed to sit up in bed.

The man has been sitting up in bed to-day; his appetite is good, and as yet has had no symptom from this rather extensive fracture of the skull.

The points to which I would draw attention are the absolute absence of any symptoms, except temporary unconsciousness, which must have been due to concussion; the absence of any shock; the absence of any symptoms referable to the arm or leg centers in the region in which this fracture occurred.

I believe the man will go on to a perfect recovery. What the ultimate result will be as to the occurrence of epilepsy or other impairment, of course it is impossible to say.

Discussion. Dr. H. A. Cottell: It is remarkable that so much injury could have been done without resulting in some paralysis. The damage must have been done to that portion of the brain sufficiently behind the Rolandic fissure to miss the motor areas. I can not see how an injury done in the Rolandic region could fail to produce paralysis. But we know great damage can be done to the brain sometimes without symptoms. We are all familiar with some remarkable cases where the anterior lobes have been injured and considerable quantity of the brain has come out, and still the patient has seemed to be none the worse for it.

Dr. H. H. Grant: I think, as Doctor Cottell has stated, that the injury, of course, must have been a little further back than the convolution between the intraparietal fissure and the fissure of Rolando, otherwise we certainly would have had some influence upon these areas of sensation and motion. In the absence of any distinct measurements we must take the view, from the symptoms presented, that these areas were not involved.

There can be no question about the propriety of the steps undertaken by Dr. Frank, and I think the result emphasizes the importance in operations of this kind of leaving a drain out of the brain substance proper. It is generally advocated by surgeons of experience at the present day that no drain should be introduced beneath the dura except in conditions that are positively septic. Where the dura can be closed up after the wound has been rendered aseptic by irrigation and other measures of cleanliness, better results will be obtained than the risk of

infection through a drain which passes directly into the cranial structures.

I am disposed to question the propriety of allowing a patient who has received as serious an injury as this to sit up or take any very concentrated nourishment as early as this after the operation. The dangers of inflammation have not yet passed. As we all know, it takes from sixty to eighty hours in many instances for septic infections to sufficiently progress to develop any actual form of inflammation, and until this period has passed, and until all possible chances of irritation extending or favoring these processes of inflammation have been obviated by time, I think it is better to keep these patients absolutely quiet. I have once or twice seen patients who had received severe concussion of the brain, so-called, do extremely well for three days, then develop symptoms of meningitis. Of course the thoroughly comfortable condition of this patient encourages the surgeon to allow him to have his own way, particularly if he is disposed to sit up, but it is my custom after all operations upon the brain, even though they are absolutely aseptic, done in the absence of any injury, to keep the patient absolutely recumbent for at least a week, and to withhold from him also concentrated nourishment so as to in every way lessen the chances of inflammation of this exceedingly irritable structure, and, in addition, where inflammation is so difficult to control if once set up.

Dr. J. G. Sherrill: This case is one of great interest. I can readily see how we would expect to have symptoms of pressure (paralysis) if this injury involved the Rolandic region, yet I do not believe we always get paralysis as a result of the presence of bone pressing upon the brain in this region. The brain, to a great extent, accommodates itself to this pressure. I have seen a case of this kind in which there was only slight paralysis, and yet the depression was considerable, and quite a large clot pressed upon that region. I reported the case to the Surgical Society. An area two and a half by two and a quarter inches was depressed, lying on the brain, and there was a clot of considerable dimensions. The brain often accommodates itself to this pressure, especially where you have a fracture with the vault open, so that the brain is not in a closed cavity at the time.

In Dr. Frank's case the injury was behind the fissure of Rolando, therefore missing the ordinary centers, which we know cause certain sets of muscles to be paralyzed.

I can agree with Dr. Grant fully in stating that the patient should

not be allowed to get up this early. In my opinion, a patient who has suffered any injury of the brain should be watched very carefully for a week or more after such injury. The chances of infection are certainly present; infective germs may have been carried in at the time of the injury, and their presence should lead us to suspect that we might have suppuration in the brain, and for that reason I would take away all chances of congestion in this case, and any thing that would tend to favor the development of this later suppurative or inflammatory process.

I also agree in the statement that the dura should be sutured in all cases where it is reasonable to suspect that we will avoid any septic trouble. If, however, you have reason to suspect there will be sepsis, you should certainly drain. In cases of this kind I think it is safe to close the dura, with the distinct understanding that the moment any symptoms referable to inflammation of the brain develop you would open the dura and drain, just as you would any other suppurative wound.

Dr. Frank is to be congratulated upon the manner in which he has handled this case, and upon operating early. The mortality of operations on the skull gives 1.23 per cent of deaths from early trephining, and 32 per cent from late trephining; therefore I would advise early operation in every instance. If we are careful in our technique, we can not be too radical in our operation. Where the symptoms are attributed to concussion, and the patient does not rally in a short time, an operation should be done. I would also advise in every case of suspected fracture, where you have brain symptoms, to operate.

Dr. Louis Frank: I fully appreciate what Dr. Grant has said as to allowing this man to be out of bed so early, and the danger of subsequent suppuration as a result of inflammation. In this case one hundred hours have elapsed now since the injury, and at the time the man was allowed to sit up more than ninety hours had elapsed from the time of the injury. If there is to be any inflammation in this case we should have had some symptom of it, but all the symptoms which he had have disappeared, and to-day when the dressing was changed the man was in better condition than at any time previously. He was not allowed to get out of bed, but was only allowed to sit up in bed.

In injuries of this kind, if there is any evidence whatsoever of suppuration about the brain, if there is any evidence of septic infection, or any thing to cause us to suspect there is pus in the brain or in the

underlying structures, the dura should be opened and the wound treated as we know all wounds of this kind should be treated.

I am inclined to agree with Dr. Sherrill that injuries of the head may occur even in this region without any marked symptoms. While he was speaking I recalled to mind a case which probably Dr. Stucky will remember, a Scotchman seen in the city hospital about twelve years ago. This man was struck in the head by a weight. He came into the hospital to be treated for something entirely foreign and not connected with this wound. After he had been in the hospital for two or three weeks he went into coma, became profoundly unconscious, had stertorous breathing, pulse dropping to 40, respirations very slow. He was transferred to the surgical ward, where by the courtesy of Dr. Stucky I operated. This man had an enormous comminuted fracture involving the entire posterior part of the skull, and also involving to some extent the parietal bone; there were granulations extending through this fracture, and we removed the bone over an area three inches in diameter. There were spiculæ of bone driven into the brain in every direction, some quite long fragments, one being over two inches in length driven into the brain. These were removed, and the next day the coma had disappeared, and when I went into the ward the man was lying with his head off the bed smoking a cob pipe. He recovered completely, and as far as I know. has had no symptoms since.

In the case reported to-night, notwithstanding the location of the injury, which may have been posterior to the Rolandic region, it is quite remarkable that such an extensive injury should have occurred absolutely without any symptoms. By actual measurement the site of the injury was one and a half inches behind and four and a half inches above the ear. There was an extensive laceration of the brain tissue, admitting my two fingers almost up to the hand; I passed them down into the wound, the direction being downward, forward, and inward. I thought at the time that my finger would go into the lateral ventricle. We found that the brain was normal in this region, and the wound did not extend to the lateral ventricle, although it went to within a short distance of it.

B. A. ALLAN, M. D., *Secretary.*

Reviews and Bibliography.

Obstetric and Gynecologic Nursing. By E. P. DAVIS, A. M., M. D., Professor of Obstetrics in Jefferson Medical College and Philadelphia Polyclinic. 12mo volume of 402 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Price, \$1.75 net.

"This volume is designed to furnish instruction as to the various duties of the obstetric and gynecologic nurse. Obstetric nursing demands some knowledge of natural pregnancy, and of the signs of accidents and diseases which may occur during pregnancy. It also requires knowledge and experience in the care of the patient during the labor and her complete recovery, with the needs of her child. The obstetric nurse must also know how to help patient and doctor in the accidents and complications of labor, and has an important part to play in caring for mother and child in the diseases which occasionally attack them during the puerperal period. Gynecologic nursing requires special instruction and training, and a thorough knowledge and drill in asepsis and antisepsis are absolutely indispensable."

Dr. Davis is to be congratulated upon the production of such a volume as this, and the publishers have done all that is possible in illustrations and book-making. We heartily recommend this book as the best that has yet appeared upon this subject, and, if its teachings are followed, will result in great good to the profession and the patient. No up-to-date physician can well afford to be without this valuable treatise upon so important a department of medicine.

The American Year-Book of Medicine and Surgery for 1901. A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged with critical editorial comments by eminent American specialists. In two volumes. Volume I, including General Medicine. Octavo. 681 pp. Illustrated. Volume II, General Surgery. Octavo. 610 pp. Illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Per volume: Cloth, \$3.00 net; half morocco, \$3.75 net.

"The issue of the Year-Book for 1900 in two volumes met with such general approval from the profession that the publishers decided to follow the same plan with the Year-Book for 1901. This arrangement has a two-fold advantage. To the physician who uses the entire book it offers an increased amount of matter in the most convenient form for easy consultation, and without any increase in price, while specialists and others who want either the medical or the surgical section alone secure the complete consideration of their branch at a nominal sum, without the necessity of purchasing considerable material for which they have no special use."

These volumes are too well known to need any introduction to the medical profession, having now become almost indispensable to the busy prac-

itioner who wishes to consult the latest and best in medical and surgical literature, and have each year been anxiously awaited. Dr. Gould and the publishers are to be congratulated upon the selection of so able a corps of writers and the excellent volumes produced. We consider them the best books of their kind in the English language, and recommend them to all wishing current literature.

A System of Practical Therapeutics. By eminent American and foreign authorities.

Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics, Jefferson Medical College; Physician to Jefferson College Hospital, etc., Philadelphia. New (second) edition, thoroughly revised. In three very handsome octavo volumes, containing 2,593 pages, with 427 engravings and 26 full-page colored plates. Per volume: Cloth, \$5.00 net; leather, \$6.00 net; half morocco, \$7.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1901.

"This system is designed to furnish a thoroughly practical work of reference in medical treatment, and also in the management of such surgical cases as are met with by every physician. The needs of the general practitioner have been kept constantly in view by the editor and his collaborators, and their endeavor has been to prepare articles so clear and definite, so comprehensive and detailed, that the reader may be able to carry out successfully the methods which the widest experience has shown to produce the best results. The work is above all practical. Each author tells with minute detail how he would treat the case under consideration if he himself were at the bedside. Illustrations have been freely used whenever they can make the text more clear, and prescriptions indicating the best methods for combining remedies for definite purposes will be found in abundance throughout the work. Remedial agents other than drugs, preventive measures, etc., are carefully and completely covered, and in the third volume special attention is given to treatment in those general and special surgical affections which the family physician is likely to meet in his regular practice.

"Although nominally a second edition, this system is practically a new work, having been carefully revised in every line in order to reflect the knowledge of to-day. Many of the articles are entirely new, as will be seen from the following summary of the contents of Volume I: General Therapeutic Considerations, by Horatio C. Wood, M. D., LL. D.; Prescription-writing and the Combination of Drugs, by Joseph P. Remington, Phar. D., Ph. M., F. C. S.; General Sanitation, by Henry B. Baker, A. M., M. D.; Nutrition and Foods, including the treatment of Obesity and Leanness, by I. Burney Yeo, M. D., F. R. C. P.; General Exercise, by Edward Mussey Hartwell, Ph. D., M. D.; The Rest-cure for Neurasthenia and Hysteria, by John K. Mitchell, M. D.; Electro-Therapeutics, by A. D. Rockwell, A. M., M. D.; Hydrotherapy, by Simon Baruch, M. D.; Climate, by S. Edwin Solly, M. D.; Mineral Waters and their Medicinal Uses, by James K. Crook, M. D. (new); Massage and Swedish Movements, by Robert E. Moore

(new); Disinfection, by W. M. L. Coplin, M. D. (new); Diseases of the Thyroid and Thymus Glands, including Myxedema, Cretinism, Graves' Disease, and Obesity, by S. J. Meltzer, M. D.; Chronic Articular Rheumatism, Rheumatoid Arthritis, and Gout, by James Stewart, M. D. (new); Treatment of Diabetes Mellitus, by James Tyson, M. D. (new); Diseases of the Blood, by Ralph Stockman, M. D., F. R. C. P., Edin. (new); The Present Treatment of Syphilis, by Edward Martin, M. D.; The Treatment of Tuberculosis, by Lawrence F. Flick, M. D. (new); Scrofulosis, by Walter Chrystie, M. D.; Scurvy, or Scorbutus, by Charles Edward Banks, M. D. (new)."

This work needs no introduction to the profession, as the first edition soon became a favorite with the doctors, and we feel sure that this second edition will be more popular than its predecessor.

THE Western Ophthalmologic and Oto-Laryngologic Association will meet in its next annual session in Cincinnati, Ohio, April 11th and 12th. A fine programme has been arranged, and the medical profession are cordially invited to attend the sessions. Dr. C. R. Holmes, of Cincinnati, is Chairman of the local Committee of Arrangements. Dr. M. A. Goldstein, of St. Louis, is the President, and Dr. W. L. Ballenger, of Chicago, is the Secretary.

THE INFLUENCE OF NARCOSIS BY CHLOROFORM UPON THE PAINS OF LABOR.—Westermarck publishes in the *Archiv fur Gynakologie*, 1900, Band lxi, Heft 1, the reports of a series of elaborate experiments to determine the influence of chloroform upon the action of the uterus during labor. These experiments were conducted in Stockholm, and are of great interest. He concludes that complete narcosis by chloroform diminishes the frequency of uterine contractions and lengthens the interval between the pains. It exercises no influence upon the intra-uterine pressure between the pains, but renders uterine contractions shorter in duration. The intra-uterine pressure is lengthened during the pain under the full influence of chloroform. The pain reaches its highest point in practically the same time as in cases where chloroform is not given. Obstetric anesthesia with chloroform lessens the frequency of the pains. It lengthens the interval between them, exercises no influence upon the intra-uterine pressure during the pains, but greatly diminishes the suffering which the pains occasion. In a small degree obstetric anesthesia with chloroform lessens the duration of pains. It does not, however, diminish the intra-uterine pressure. The highest point of the pain is reached in about the same time with or without obstetric anesthesia. The practical conclusion of his experiments is that the use of chloroform in obstetrics should be limited to those cases where the suffering is intense and the control of the patient becomes so necessary that it seems best to risk some prolongation of the labor in order to control them.—*The Am. Jour. of the Med. Sciences.*

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H. A. COTTELL, M. D., M. F. COOMES, A. M., M. D., Editors.

ERNEST G. MARK, A. B., M. D., and JOHN R. WATHEN, A. B., M. D., Assistant Editors.

A Journal of Medicine and Surgery, published on the first and fifteenth of each month. Price, \$2 per year, postage paid.

This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The Editors are not responsible for the views of contributors.

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QUACKERY AND EMPIRICISM.

The calling of the professional scientist excepted, it is remarkable that of the great learned professions medicine is the only one that rests upon a scientific basis. And the dream of the optimist, which will doubtless be realized before the close of the twentieth century, is that medicine will eliminate all hair-brained theory and empirical practice and rest, as surgery now rests, upon strict science and the skill, art, and handicraft of him who practices it. There are no quack surgeons, though in certain small specialties quacks may and do practice surgical measures; but to be successful in these the quack must and does have real skill and some science. In internal medicine the case is different, since a certain amount of empiricism must enter into the therapeutic practices of the most learned and conscientious physician. And it is right here on this debatable ground that the quack is able to fool the public and line his coffers with their gold.

Says Oliver Wendell Holmes: "What is the strength of all quackery? Hope kept alive. What is often the too fatal gift of science? A prognosis of despair." And so our very science is sometimes turned against us by the quack, causing us now and then to "be hoist by our own petard."

Quackery is said to be alarmingly on the increase in these latter days, but we take it that the quack himself is far less a menace to legitimate medicine than the spirit of quackery that is wafted abroad among the people. Every means for the dissemination of intelligence is employed by quackery for the imposition of itself upon the people. There is no medical discovery of the chemist or therapist that is not at once seized upon by unprincipled men and straightway advertised as a secret nostrum for the cure of disease. But the patent medicine man working the public through flaming advertisements is by no means so damaging to legitimate medicine as the same old sharper in his new rôle of proprietary medicine man. For by his methods the unwary doctor is made to directly lure the public to the counter of the nostrum vender, and the medicine concoctor is made to roll in wealth, while the doctor is left by the wayside to pick up a living as best he can.

It is amazing to see how nearly all young physicians and not a few older ones are deceived by the peddlers of purloined doctors' prescriptions, sold without formulæ appended under fancy copyrighted names. The physician who practices medicine on such a materia medica does not and can not know what he is giving the patient, must often fly in the face of Sydenham's aphorism, *primum est non nocere*, and is bound sooner or later to degenerate into a mere empiricist. Moreover, he must be short-sighted, indeed, if he does not see that he is giving the putter of known drugs into unknown compounds of strangely unscientific names a pull through him upon the public that will cause his clientele in all slight ailments to leave him out and take the short cut to the drug store, while the serious ailments are often practiced upon by the druggist, the neighbors and the wiseacres of the family, to the patient's hurt or death, the doctor being called only as a matter of necessity when the case assumes serious or alarming characters.

Another hindrance to the doctor's progress in a business way is the piracy of his prescriptions. They are not only endlessly refilled for the patient by the druggist without the doctor's leave; but they are duplicated in copy for the whole neighborhood, and sent in letters to the kinsfolk, friends, and acquaintances of the patient throughout the civilized world. We have heard a druggist boast that his prescription file was worth in refills far more to him in a year than all the new prescriptions that came to his counter.

But time and space forbid at this writing further details to the point, though the material is superabundant. Indeed, the

medical optimist in contemplating the state of medicine at the beginning of the new century must see an Augean stable awaiting the Hercules of reform to cleanse it before his dream can be realized. Nevertheless we believe that the reformers and the reform will come in due time. For medicine is rapidly assuming the state of an exact science, and when that point is reached quackery will have had its day. "Though all the winds of doctrine be turned loose, so truth be in the field, we do her wrong by licensing and prohibiting to doubt her strength."

"Truth, crushed to earth, shall rise again,
The eternal years of God are hers;
But Error, wounded, writhes with pain,
And dies among his worshippers."

INOCULATION AGAINST TYPHOID FEVER.

The following editorial, taken from the London Lancet, is of such importance to the medical profession that we wish to reproduce it for our readers in this country. Advances in preventive treatment, since the days of the introduction of vaccination, have attracted almost as much attention as the treatment of the disease itself, and are of equal importance to humanity at large:

The general results of a statistical comparison between the inoculated and uninoculated British soldiers serving in India, so far as an experimental trial has been made of Professor Wright's method of inoculating against enteric fever in that country, are stated to have been distinctly in favor of the inoculated. The results are, at any rate, sufficiently favorable to indicate that a further and more extended trial of this system of treatment should be made. An interesting communication from Professor Wright, published in *The Lancet* of February 9th, page 399, furnished the results of an officially compiled statistical statement dealing with the effects of anti-typhoid inoculations in the case of one corps, the Fifteenth Hussars. From this statement it appears that the incidence of enteric fever in the inoculated is represented as 0.55 per cent and the mortality 0.27 per cent, while the incidence in the uninoculated is 6.14 per cent and the death-rate 3.35 per cent. Although these figures are drawn from a comparatively limited number, it will be seen that so far as they go they are very favorable to inoculation.

Inoculation against enteric fever has also been largely resorted to among the troops serving in the South African war, and the publication of

the returns showing the results is anxiously awaited, and should soon, we imagine, be forthcoming. The two sets of observations—those from India and those from South Africa—should furnish reliable data for estimating the influence of inoculation in lessening the soldier's liability to contract or to die from this form of fever, and it is quite possible that the returns from South Africa may turn out to be the more valuable of the two. According to official reports extending over many years, it seems to be, statistically speaking, a well-established fact that the susceptibility of British troops under a short service system to contract enteric fever in India is most marked during their first and second years of service in that country, and notably during the first year. In the report of the Sanitary Commissioner with the Government of India for 1898, for example, we find that the ratio of mortality from enteric fever per 1,000 of strength was greatest in the age-period, twenty to twenty-five. As regards residence in India, the ratio of mortality from enteric fever per 1,000 of strength was highest in the first year of residence. The total number of deaths from enteric fever in the first year of Indian service was 236, and 70 out of every 100 deaths from all causes were from enteric fever. Out of the total number who died at all periods of residence from enteric fever, 41 per cent were in their first year of Indian service. These general results are, moreover, only confirmatory of those which have long been set forth in the official reports of former years. It may be pointed out, therefore, that any preponderance of soldiers in their first year's service on one side or the other, inoculated or uninoculated, might prove very misleading. The figures showing the results of inoculation might not be fairly representative of the advantages it confers where the subjects of inoculation were mainly composed of the class most susceptible of being attacked by enteric fever; on the other hand, the figures might unduly exaggerate the advantage where the least susceptible happened to form the majority of the inoculated class. It is highly probable, of course, that the troops serving in India have not been in any way specially selected, but have been taken indiscriminately and as a mere matter of convenience, as they voluntarily offered themselves for inoculation, in which case there would be no such disparity between the inoculated and uninoculated as would practically affect the results of a comparison being made between them. The returns obtained from the troops serving in South Africa will not be open to any fallacy of this sort. The aggregate number of troops is very large; they are or were nearly all of about the same length of service in that country; that is, in their first year, and have all been subjected to the same or very similar conditions. The troops that came from India may, it is true, have already paid their tribute and have acquired immunity, owing to their having been previously attacked with enteric fever while resident in that country, but the Indian contingents form no preponderating part of the army in South Africa. When all the figures bearing on inoculation against enteric fever, and derived from observations made upon our army in South Africa, are forthcoming, we ought to have a good guide to the value of the treatment.

Supposing the protective influence of inoculation against enteric fever to be established as the result of these investigations, there still remains several points that will have to be determined before it can be generally applied as a practical measure; for example, the degree of immunity which it confers and for what length of time it confers it. It need scarcely be said that the subject is not merely one of scientific or medical interest. It is devoutly to be wished that the evidence of figures and experiments, with which we have yet to be furnished, may prove sufficient to put the value of inoculation against enteric fever on a secure basis as a scientific and successful method of therapeutics. If this should turn out to be the case, Professor Wright will have conferred an inestimable boon, not on the British army only, but on humanity in general.

FIFTY-NINE CASES OF ECLAMPSIA WITHOUT A DEATH.—Professor Stroganow, of St. Petersburg, reports a series of cases of puerperal eclampsia under the above title (*Monats. f. Geburts. und Gynäkologie*).

In the most favorable published statistics, and excluding all cases which were beyond hope when first seen, the mortality is over fifteen per cent, while ordinary statistics give a much higher death-rate (about thirty per cent).

The author has had series of cases in which the mortality reached twenty-five per cent, but the present paper deals with three particular groups, in which there was no mortality, viz:

Thirty-seven cases in the Institution for Midwives, during two years of his service.

Nine cases in the Alexandro-Newsky Maternity, during the same interval of two years.

Thirteen cases treated in the various services of the author since January 1, 1900.

As already stated, the author does not mean it to be inferred that these fortunate series of cases represent his customary practice. Since he has other series under precisely the same conditions with a considerable mortality, these exceptional groups of cases appear to denote that the type of the disease varies more or less in severity. He regards the convulsions as the disease; when these are severe the prognosis is grave, and *vice versa*.

The indications are simple, viz: To diminish the convulsions as to number, frequency, and severity, and to confirm the patient's vital forces to enable her to withstand the effects of the convulsions.

To fill the first indication he abjures chloroform narcosis entirely, save in cases in which the patient is able to breathe freely. After the first convulsion morphine and chloral should be given for their prophylactic effects.

Next to the morphine-chloral narcosis the principal remedy is extraction of the child, provided this can be effected without danger to the mother or child.

Secondary indications are to protect and favor the action of the respiratory and circulatory organs in every possible way, and to exclude all sources of peripheral irritation.

The narcosis should be kept up uninterruptedly for from twenty-four to forty-eight hours.

Save for the title, this paper does not differ materially from the presentment of the author before the recent International Congress at Paris.—*Medical Review of Reviews.*

Special Notices.

"PARALDEHYD" possesses many of the good without the evil qualities of chloral. Used in insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see advertisement in this issue), which is an elegant preparation.

SANMETTO IN PROSTATIC AND BLADDER DISEASES.—I have used Sanmetto in my practice for several years, and believe it to be a preparation of more than ordinary merit for the cure of prostatic and bladder diseases. The ethical manner in which it is put before the profession allows the physician to prescribe it, without fear of its use by the laity, in all cases where it is indicated.

Omaha, Neb.

R. D. MASON, M. D.,

*Prof. of Rectal and Pelvic Surgery in Creighton Med. Col.;
Surg. to St. Joseph Hospital.*

INGLUVIN.—The natural glycocholic acid in Ingluvin is the active principle and the most efficient agent in the treatment of all stomachic and enteric disorders. Ingluvin is extracted from the lining membrane of the gizzard of the species "Gallæ." It is far superior to pepsin of the hog. Ingluvin is fast superseding other remedies in indigestion, dyspepsia, cholera morbus, cholera infantum, and stomachic and enteric ailments. It is specific for nausea in pregnancy, alcoholism, seasickness, or from whatever cause. Ingluvin causes absorption, increases peristaltic action, thereby removing accumulations from the mucous membrane. It allays inflammation, invigorates the debilitated organs, and assists nature to perform her proper functions. Ingluvin can be used in combination with other drugs, as in the case with pepsin. As there is no tonic effect, the dose may be repeated as often as necessary. For dyspepsia, indigestion, and sick stomach, caused from debility of that organ, five to twenty grains after each meal; for cholera morbus and alcoholism, twenty grains every two hours until relieved; for marasmus, five grains every four hours; for vomiting of pregnancy, full doses of twenty grains should be given. Administer first dose immediately upon arising in the morning. In all other forms of nausea, from ten to twenty grains until controlled.—*From the Medical Sentinel.*

W. C. FREDERICK, M. D., Lono, Ark., says: "I have used S. H. Kennedy's Extract of Pinus Canadensis (Dark), one to three of water, in sore throat from cold with splendid results, and have now under treatment a little boy, three years old, suffering from strumous diathesis, who has been afflicted over a year with otorrhea. Have been using as an injection two drachms of S. H. Kennedy's Extract of Pinus Canadensis to four drachms of water, three to five drops two or three times a day, the ear previously cleansed with castile soap. The little fellow commenced to improve from the very start, and is rapidly improving daily. The discharge has almost ceased. He has been on this treatment for about two weeks."

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

VOL. XXXI.

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No. 6.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

SOME OF THE FEATURES OF HEALTH ADMINISTRATION.*

BY M. K. ALLEN, M. D.

Health Officer of the City of Louisville.

Admittedly this subject covers a broad field, the boundaries of its jurisdiction being unlimited. Whatever affects the health of the individual or the community at large is a proper subject for the consideration of health authorities. Comparatively speaking, sanitary science may be said to be of recent origin; it is the natural growth of advancing civilization. The degree of culture and refinement of any city or locality can be easily determined by the sanitary laws they have established and put in full force.

The ground-work for modern sanitary effort was laid when the germ theory of disease was fully established. By means of scientific bacteriology we are enabled to know something of the possibility of the destruction of agencies which cause disease and produce death. Upon the purity of three agencies largely depends the health of the human family. This being true, the work to be accomplished by health officials is, primarily, to see that the air we breathe is pure, the food we eat is wholesome, and the water we drink is free from pollution.

It is not necessary to go into details as to the composition or extent of the atmosphere at this time, but rather to deal with the problem of keeping the air we breathe free from avoidable contamination. In order to do this the work performed must necessarily be both educational and mandatory. The individual can be compelled to desist from doing that which is a menace to the health of his neighbors, but

* Read before the Louisville Clinical Society, February 19, 1901.

it is not so easy to compel him to desist from doing that which is likely to affect himself only, especially when he is under his own roof. Unless he is about to commit a crime, all that can be done is to advise, to warn, to appeal to his common sense and his intelligence. So it would then seem that it is indeed no easy task to endeavor to keep the air we breathe pure, especially in cities.

This is a subject of too much magnitude to undertake to discuss it at any length in a paper of this character, but merely touching the subject of pure air we may mention the importance of proper methods for the disposal of excreta, garbage, and other filth accumulations of draining and plumbing.

In attempting to introduce and enforce measures of this character it should be a recognized fact that cleanliness is the keynote to the whole work. Garbage and night-soil should be cremated; and, incidentally, I will say that after three years of incessant labor and persuasion, I am glad to report that a crematory for the destruction of garbage has been erected on Hancock Street south of Kentucky, which is now in successful operation. A matter of second importance to none in securing pure air is proper drainage by a thorough system of well-located and well-constructed sewers. This would enable cities to abolish the privy vault, which contaminates the atmosphere and pollutes public and private wells. Proper plumbing, under the supervision of a competent plumbing inspector, made responsible under ordinance requirements and restrictions, would do much toward securing pure air in private houses.

The method of heating and ventilating public places, churches, hotels, halls, and residences has much to do with pure air, and this is especially true in localities where artificial heat is necessary for so long a period. The character of the soil upon which houses are to be erected does not seem to be generally considered, yet it is a well-known fact that there is a certain amount of air circulating through the upper layers of the earth's surface. This air, as it rises into general circulation, will be noxious or wholesome according to the character of the accumulation in the ground from which it emanates. The close proximity of buildings in the congested portions of large cities frequently renders inoperative nature's most potent disinfectors—sunshine and air.

In granting permits to erect buildings, municipal authority should keep in mind the fact that the oxygen contained in pure air, in con-

junction with an abundance of sunlight, is highly destructive to many forms of microscopic life, which either directly cause disease or favor its production by lowering vitality, thus enfeebling the natural resisting powers of the human system. That sunshine and even diffused daylight are powerful germicides there is now no question.

Experiments made by leading scientific authority have fully demonstrated that the anthrax spore, which is regarded as possibly the most resistant organism, is destroyed by a few hours' exposure to sunlight; the typhoid bacillus is destroyed in from six to ten hours' exposure to sunshine; the virulence of the spirillum of Asiatic cholera is destroyed in from three to four hours by exposure to the direct rays of the sun; the tubercle bacillus, the diphtheria bacillus, and other disease-producing organisms are destroyed in less than eight hours after exposure to sunlight and air. These truths demonstrate the importance of abundant pure air and light in thwarting the action of death-dealing germs.

Electric light will doubtless be utilized to much advantage as a destructive agency of many forms of microscopic life within the next few years. It should be universally known and recognized that "fresh air is the breath of life in a man's nostrils."

Proper food in a wholesome condition, uncontaminated by filth or poisonous material, and properly cooked, is necessarily essential to good health. Dr. Wiley, who for the past twenty years or more has been the chief chemist for the National Agricultural Department, says "that practically every thing we eat and drink is adulterated." This is a broad statement, and, coming from this high official source, should be sufficient to induce municipal, State, and national authority to take steps whereby the nefarious business of adulteration should be stayed.

A pure food law went into effect in this State on June 13, 1898, and an annual appropriation of \$5,000 was made to carry out its provisions. Prof. M. A. Scoval, Director of the Kentucky Experimental Station (State College), Lexington, Ky., was authorized to put this law into full force and effect. There seemed to be some defect in this law which prevented the enforcement of its provisions. The last General Assembly of Kentucky so amended the law of 1898 that it is now thought that the law may be enforced. An appropriation of \$7,500 accompanied the passage of this bill. Professor Scoval was again authorized to administer this law.

A great many analyses have been made, Dr. Palmer, of the Louisville Manual Training School, having made three hundred alone.

Some prosecutions for violations have been instituted, and it is hoped that convictions will follow, and thus establish the legality of the statute.

Ohio and Michigan each has a pure food law which is serving its purpose thoroughly well, and has proven the means whereby adulterated food products are fast being eliminated from these two States. Milk naturally stands first in order of foods. It is not only the natural and almost entire diet of the infant, but it constitutes a large portion of the food of the adult. The maintenance of this article of food in its purity is, therefore, highly essential. In order to do this it becomes necessary to trace the product to its source or fountain-head, and then follow it to the point of distribution among the consumers. The herd of cattle furnishing the supply must be healthy, well fed, and kept in airy, spacious, well-ventilated stables. The most rigid scrutiny and surveillance should be exercised over all dairies furnishing a public milk-supply.

The tuberculin test should be frequently applied to all dairy cattle, and one of the requirements of health officials should be the certificate of a competent veterinary surgeon every two or three months showing that the cattle from which the milk-supply comes have been subjected to the tuberculin test, and that the herd is otherwise in good physical condition. All dairies supplying milk to the public should be instructed and required to keep the milk absolutely clean after leaving the udder of the cow, immediately after which it should be cooled to at least 45 degrees, placed in perfectly sterilized cans, kept at this temperature in transit, and, in fact, until final delivery to the consumer.

We all understand that upon this depends the prevention of the development of bacteria. If bacteria be developed, a by-product results which is a virulent poison, which, it is claimed, can not be destroyed by boiling. This by-product is a ptomaine called tyrotoxicon, which was discovered by Dr. Vaughan, and sometimes appears in cheese, in cream, and other products, not infrequently causing serious results.

It is well known that milk not infrequently contains the germs of communicable diseases, and that epidemics of scarlet fever, diphtheria, typhoid fever, etc., have been frequently traced to a contaminated milk-supply. Sterilization is quite a safeguard from danger from this source.

Dr. B. F. McIntyre, New York City, has devised a process whereby 80 per cent of the water contained in whole milk can be abstracted by

freezing it while in moderate agitation. The water thus obtained is taken in the form of ice, leaving almost without loss the solid product.

While the resultant is found not to be perfectly sterile, yet the bacteria are in a large measure destroyed. The concentrate thus obtained can be put in glass jars, distributed to consumers, and will keep for weeks. Dr. Edward Burnett has established a plant in Boston of sufficient capacity to fully demonstrate the commercial advantages of this process. It is claimed for this process that the bulk of ordinary milk can be concentrated to the extent of four fifths; that distribution from house to house can be made once a week; that the fat globules are uninjured, and as a result the cream is unimpaired for table use.

Pathological bacteria are completely destroyed, and the milk is thus made perfectly safe for use. Dr. McIntyre hopes to ultimately extract all the water contained in milk, and looks forward to the practical demonstration of furnishing milk in solid form, with keeping qualities equal to that of butter and cheese. The process thus begun will possibly, in the near future, revolutionize the distribution of the milk-supply of the whole world, and the diseases incident to impure milk may be materially lessened.

Of all substances required in the maintenance of the human system, not one enters more freely and universally than water. How important, then, that the water we use be pure, of good quality, and absolutely free from contamination. Because of the fact that the health and welfare of the inhabitants of cities depend so largely upon the character of the water-supply, health officers from time immemorial have recognized that one of the first questions pertaining to municipal sanitation is the consideration of the water-supply. All civilized nations have occupied themselves in an endeavor to devise means whereby the problem might be solved. Hippocrates proclaimed the necessity of pure water 450 B. C. Pliny and Galen later called the attention of the people to the fact that polluted water was dangerous to health, and advised boiling as a means of destroying the dangerous elements contained in polluted water. The immense sums of money expended in constructing, perfecting, and maintaining aqueducts and conduits sufficient for their requirements by the ancients were achievements which have remained conspicuous monuments of the enterprise and high standard of their civilization.

The city of Jerusalem was provided with a system of water-works in 717 B. C. Water was conveyed to the ancient city of Rome in the

year 312 B. C. The expense involved and time of construction of some of the ancient systems of water-supply are simply wonderful to contemplate. For instance, the water-works at Rome received its supply from a distance of eleven miles, and the channel was under ground with the exception of about one hundred yards. In the first century this supply was inadequate, and Emperor Nero had constructed nine aqueducts, with a capacity of more than 200,000,000 gallons a day. The water supplying these aqueducts was conveyed a distance of two hundred and fifty-five miles.

The Claudian aqueduct, which was constructed 50 A. D., cost \$12,000,000, and is to-day regarded as one of the grandest and most magnificent of all Roman ruins. Vienna procures her water-supply from the Austrian Alps, a distance of sixty-five miles, the Danube having been abandoned. Munich obtains her water-supply from mountain springs, many miles distant from the city, since which time typhoid fever has become so rare that the medical schools are unable to demonstrate the disease to students from observation. Manchester, England, is supplied with water from a lake over one hundred miles distant from the city.

Marseilles has a water-supply capacity of 285,000,000 gallons daily, which is conducted sixty miles through forty-five tunnels of an aggregate length of eight and a half miles, and across many miles by aqueducts, the largest of which, that over the ravine of the River Ars, is 1,287 feet long and 262 feet high.

In this country, since 1872, seventy-eight irrigation plants have been constructed, and as many as fifteen plants where the sewage receives chemical treatment, and in addition to these there are over forty more now being constructed, all intended to purify water-supplies. The theory that polluted water pouring into a running stream purifies itself in a short distance has long since been exploded.

It is now known that the germs of typhoid fever and other diseases may be carried long distances by flowing streams without losing their vitality. Detroit, Mich., claims to have received the germs of typhoid fever from Port Huron, sixty miles distant, in this way not long since. In order to insure a purer water-supply, the city of Chicago has recently completed the construction of a "drainage channel" at a cost of \$35,000,000. The refuse of this city has been diverted into this channel from Lake Michigan, where it formerly emptied.

A series of both chemic and bacteriological tests of the water of this

channel have been in progress for some time in order to determine how far the pollution of this stream extends. This city, basing their claims upon exhaustive examinations already made, contend that effective decomposition of sewage matter and consequent purification of the stream takes place in a flow of fifty miles. On the other hand, the city of St. Louis, which is about three hundred and fifty miles distant, asserts that their water-supply, and, in fact, that of all of the lower Illinois Valley, is being polluted by reason of the Chicago "drainage channel," and are just now contemplating the necessity of an appeal to Federal authority to protect them against this possible source of pollution.

It is now suggested by Dr. Reynolds, the Health Officer of Chicago, that an exhaustive series of chemic and bacteriological tests be made by Washington University in order to positively determine the matter satisfactorily to both cities. Recognizing the high scientific standing of this institution, taken together with their disinterestedness in the result, we may await their report with a good deal of interest, because the distance polluted streams flow before self-purification may be more definitely determined.

The self-purification of sewage-polluted streams is accomplished by means of mechanical agitation, the influence of the atmosphere, dilution, sunlight, sedimentation, and exhaustion of bacterial food-supplies. Sedimentation and exhaustion are regarded as being the most effective factors in the purification of contaminated water flowing long distances.

The best obtainable statistics of both this country and Europe show that, exclusive of special epidemics, a fair estimate of the death-rate from typhoid fever occurring in large cities under ordinary healthful conditions should not exceed 25 per 100,000 population per annum. When we contrast the death-rate as occurring from this disease in the larger cities of this country with this estimate, we then realize that to polluted water-supplies must be attributed in a large measure the increased typhoid death-rate. By reference to page 49, last health report for the city of Louisville, it will be observed that the death-rate from typhoid fever for the past ten years was as follows per 100,000 inhabitants: 1891, 80; 1892, 60; 1893, 70; 1894, 70; 1895, 60; 1896, 60; 1897, 40; 1898, 50; 1899, 50; 1900, 50.

It will be observed that the death-rate from typhoid fever in this city has averaged more than double what it should have been under

average healthful conditions for the last ten years, and this city is no worse off in this respect than many other American cities, notably Philadelphia and Chicago, where the death-rate from typhoid fever fully equals ours.

I am happy to say that our own city has under construction a combined system of sedimentation and filtration, the plant to have a daily capacity of 32,000,000 gallons. I understand that it is claimed by the officials of the Water Company that when this plant is completed our citizens will be supplied with practically pure water. Unquestionably, reservoir sedimentation and filtration, if properly performed, will do much toward removing, if it does not entirely remove, the germs of water-borne diseases.

The pollution of water courses arising from the filth naturally thrown off from large cities is, to my mind, growing to be such a serious menace to health that public opinion will at no distant day influence the Congress of the United States to enact such laws, with such severe penalties for violations, as will force all large cities and public institutions along water courses to make provisions whereby their sewage can be treated in such a modern and scientific manner as will preclude the possibility of polluting water-supplies. Would it be too much to say that the failure to provide facilities for the enforcement of proper health-work along the lines herein indicated results in a heedless, needless sacrifice of human life? And is there not a moral responsibility resting upon all official authority who fail to make provision for the application of scientific sanitary measures which are now most positively known will prevent sickness and death?

During the past twenty-five years public sanitary effort has been wonderfully aided through the establishment of diagnostic and analytic laboratories. These laboratories are now regarded as indispensable factors in the intelligent application of scientific sanitary knowledge. Marvelous results may be anticipated from future developments in the special departments of preventative inoculation and serotherapy. Preventative medicine should be the watch-word of the hour.

Carlyle said: "There is no kind of achievement equal to perfect health." Sir William Temple said: "Health is the soul that animates all the enjoyments of life, which fade and are tasteless, if not dead, without it."

While the rich achievements and progress made by the medical world during the one hundred years just past is to be commended, and should

be held up to the admiration of the world, yet it seems almost discreditable, and certainly unworthy of an intelligent and otherwise progressive country like ours, to permit the air we breathe to be made unwholesome, the food we eat to be so universally adulterated, and the milk and water we drink to be polluted, and this, too, in the morning of the twentieth century.

LOUISVILLE.

AFFECTIONS OF THE EYE AND ITS APPENDAGES IN BRIGHT'S DISEASE.*

BY WILLIAM CHEATHAM, M. D.

As affections of the deeper parts of the eye occur more often in that form of nephritis in which the kidney is small or contracted, it is that form to which I wish especially to refer. All forms of nephritis, both acute (scarlatinal and that of pregnancy) and chronic, may affect some parts of the eye; it may be simple edema of the lids or conjunctiva, sub-conjunctival hemorrhages, paralysis of the lid muscles or muscles concerned in movements of the globe, cataract, mydriasis, iritis, cyclitis, or the well-known changes seen in the retina and optic nerve. Paralysis of ocular muscles, depending upon nephritis, is more common than one would suppose from the literature on the subject; the urine should be investigated in all such cases. In acute cases the loss of vision and other symptoms are often cortical. The ophthalmoscope will show nothing, and the pupil will respond readily to light. Again, in the acute form, especially such as seen in the uremia of pregnancy, we may have marked neuro-retinitis or optic neuritis; they belong to the inflammatory type. These cases come, of course, from an auto-infection; the prognosis is more hopeful, especially if the cause, the uterine contents, can be removed. After this is done, or in any case whether labor is artificially produced or not, pot. iodide internally I find wonderfully effective in connection with diuretics, purging, etc. But it is to the retinitis and optic neuritis of chronic nephritis to which I especially wish to refer in this short paper, and the importance of the use of the ophthalmoscope as a prognosticator as well as a diagnosticator. One may make the diagnosis of chronic Bright's disease, and especially in that form known as the contracted kidney, and

* Read before the Louisville Medico-Chirurgical Society, February 1, 1901. For discussion see p. 227.

may prognosticate some years of life, yet if the ophthalmoscope can demonstrate changes in the retina and optic nerve typical of chronic nephritis, a short life must be promised, although I have seen several cases last from three to eleven years. A majority, though, of such cases seen by me have died in six months or less.

The amount of lesion seen by the ophthalmoscope does not always indicate the amount of vision present, nor do I believe prognosticate the length of time the patient may live. Such changes occur only in the later stages of the disease, and one or two small hemorrhages may mean as short a life as a case in which the changes are many and typical. I have seen typical changes in optic nerve and retina, involving all the macular region, in which one would suppose there was but little vision present, in which the vision was perfect. I remember one of the most typical cases I saw in New York while examining the eyes of school children there for Dr. Agnew, whose vision was perfect, and who lived less than a year. Optic nerve and retinal involvement is found in about thirty per cent of cases of Bright's disease of the kidneys. The retinal vessels are more often involved than those of other parts of the body, because they are terminal vessels; they have but few or no anastomoses.

It has been my lot to see many cases of neuro-retinitis albuminurica. I have seen several in which there were no derivatives in the urine for some days or weeks, and one case in which the urine showed nothing but low specific gravity for six months. The patient lived but a short time after that. A great majority of cases seen by me had never been suspected by the family physician, because they had presented no symptoms. Some came to me complaining of loss of vision, painful eyes, external ocular hemorrhages or edema of lids, and many of them applied to have glasses fitted, and in my routine work the ophthalmoscope revealed the trouble. I spoke a moment ago of typical cases; there are such, I am sure. I have seen cases in which I was just as sure as any one could be of any thing that Bright's disease was present, and it was afterward demonstrated. In such typical cases I have never been mistaken; the disease, I believe, is systemic, not local. Some other diseases, such as diabetes, anemia, lead poison, etc., cause somewhat similar changes in the nerve and retina; with them, although, and especially with diabetes, we are liable to have a concurrent albuminuria. The principal change observed in the retina in albuminuria is white patches in the deeper layers of the retina, sharply defined, alone

or in groups, mainly central, less numerous in the periphery, often arranged in a stellate form around the macula. Retinal hemorrhages, flame-shaped, often very small, are usually present, but are not so characteristic.

We have optic neuritis also, occasionally a choked neuro-retinitis. We may have a retro-bulbar neuritis, in which vision is usually much affected. With all these changes we have often extensive edema of the retina. The cause of all these symptoms is a hyaline thickening of the blood-vessel walls, a narrowing of their lumen, resulting in total occlusion and sclerosis. The white patches are fatty degeneration of the retinal layers. The disease is usually bilateral; unilateral cases are not rare; the disease is usually more advanced in one eye than the other.

Of course the presence of albumen in the urine does not make your diagnosis, neither does its absence prove that the kidneys are not involved. I have cited one case in this paper, and Edwards, in the *American Journal of Medical Sciences*, October, 1898, reports three cases in which the urine showed no derivatives. This is the case more often in the interstitial variety; the condition of the retina and cardiovascular system is of much help in making a diagnosis in these cases. The character of the casts found in the urine is also of much consequence. The hyaline, fibinous, and red-blood cell is the result more of transudation; the colloid, fatty, amyloid, and epithelial the result of desquamation; the granular cast, especially if it is persistent, indicates beyond any doubt a nephritis.

LOUISVILLE.

A CASE OF SEPSIS.*

BY J. M. ADAIR, M. D.

On October 14, 1900, I was consulted at my office and asked to prescribe for Maggie W., colored, aged twelve years. Her father said that he thought her monthly flow ought to be started, as she had never been unwell, and he thought that was the trouble. On examination I found white coated tongue, pulse 120, temperature 103°, and thought she had a case of malaria fever, and prescribed the usual remedies, calomel and quinine.

* Read before the Warren County Medical Society at Bowling Green, Ky., January 12, 1901.

Two days later, or on the 16th of October, her father reported that she was worse and wanted me to go to see her. On arriving, I found pulse 140, temperature 104.5°, and sweating profuse; bowels a little swollen, tender, and tympanitic; no delirium. I was a little puzzled and thought of typhoid fever, but thought she needed more calomel and quinine, which I gave her.

The next day her condition was about the same. Her mother said the calomel made her vomit a good deal of green bile, and that it acted on her bowels seven or eight times, and was as green as poison. She also said they had found something wrong with Maggie's privates. On inspection I found a large blister on the left labia majora, also a dirty white discharge from vagina; parts very tender to the touch and hymen gone. I was satisfied now that it was a case of septic trouble, but could get nothing from her as to the cause. I accused her of having intercourse with some man, but she denied it. This time I put her on quinine, grs. iij, every four hours, ten drops tincture iron every six hours, and teaspoonful dose of sat. solution chlorate of potassium every four hours, and washed out vagina every morning with bichloride solution and at night with plain hot water; also applied hot turpentine stupes to the bowels. I would repeat calomel every two or three days as indicated. The case ran along for six or seven days about the same, then gradually began to improve, and I dismissed her November 5th.

I would like to say right here that chlorate of potassium is the sheet-anchor in septic troubles. Give it a fair trial with other proper remedies, and be convinced. Now, the question is, was my diagnosis correct? If correct, what caused the trouble? If wrong, what was it? Could she have infected herself by masturbating or by having intercourse with a male?

CLAYPOOL, KY.

A COMMUNICATION.

Editor American Practitioner and News:

In your issue of February 1, 1899, appears a well-written paper on *The Etiology and Management of Pneumonia*, also discussion on the Pathology and Treatment of Pneumonia by the Louisville Medico-Chirurgical Society. I can not believe that the learned author in his remarks before the Society advocated the use of digitalin in the heroic doses recommended in his paper without opposition from some of the Fellows of the Medico-Chirurgical, and I am inclined to think that in some way a typographical error has crept

into his paper. If such is the case, it should not be allowed to remain uncorrected or unquestioned lest some careless reader of the paper should employ an accredited poison in such abnormally large and dangerous doses.

In his paper the doctor says: "I have used in the last two years only one preparation of digitalis, and this I have given in heroic doses. It is amorphous digitaline (Merck); it is soluble in water. I have given one-eighth to two-grain doses.

Digitalin (Merck), soluble in water, the kind sent out by the firm when not otherwise ordered, which is recommended for injection, is a poison; its maximum dose is one sixteenth of a grain, one third of a grain per day; it is not put up by any manufacturer of hypodermical tablets in larger than one-fiftieth grain doses.

Pure amorphous digitalin (Merck), soluble in 2,000 parts of water, is sent out in 15-grain vials only, costs 10 cents a grain, is a deadly poison also, and should only be used carefully. It is given in one two-hundred-and-fiftieth grain doses, rapidly increased until one fortieth of a grain is taken daily.

The use of the alkaloid is to be discouraged except for hypodermic use, which is usually unnecessary, as the stomach in pneumonia will nearly always retain the most nauseous mixtures, as we all know from experience, even ammonium carbonate being well retained in most cases.

Toxicologists differ as to the poisonous action of digitalin; recoveries have been known where as much as a grain has been taken, and if there is no mistake in the wording of the paper under consideration, it seems that a new limit has been established. H. C. Wood, in his work on Toxicology, says: "Much of the digitalin sold is inert. As the preparation is complex, variable, and expensive, it ought not to be used, especially as it has no conceivable advantage over the stable preparations of the drug; even for hypodermic use the tincture seems preferable, as the solution of digitalin seems to undergo a change in a few hours."

Infusion of tincture of digitalis prepared from the English leaves is certain, satisfactory, and safe, and fills nearly all the requirements for the exhibition of the drug.

A paper which inveighs against "unnecessary and useless drugging," advising two-grain doses of digitalin, should not pass unquestioned. The preparation used must be inert.

It is a good rule in practice to follow the advice of Sydenham, so often reiterated by the late T. S. Bell, M. D., whose teaching had so much to do with making Louisville a medical Mecca: "Never give a remedy you would not be willing to take yourself if you were the patient, and in case of doubt give the sufferer the benefit of the doubt and not the remedy."

Let me again assert digitalin is uncertain and unsafe; it should not be given in over one fiftieth of a grain doses, and the careful practitioner before using it other than in emergency cases should try it first on a healthy dog to be sure that it will not kill.

Respectfully yours,

W. I. C.,

Portland, Oregon.

**FOR CANDIDATES SEEKING APPOINTMENT IN THE MEDICAL
CORPS OF THE UNITED STATES ARMY.**

Pay and Emoluments. To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by ten per cent for each period of five years' service until a maximum of forty per cent is reached. An assistant surgeon with the rank of first lieutenant, mounted, receives \$1,600 per annum, or \$133.33 monthly. At the end of five years he is promoted to captain and receives \$2,000 a year, which, with the increase of ten per cent for five years' service, is \$2,200, or \$183.33 per month. After ten years' service as captain the pay would be \$2,400 annually or \$200 per month. The pay attached to the rank of major is \$2,500 a year, which, with ten per cent added for each five years' service, becomes \$3,000 after ten years' service, \$3,250 after fifteen years, and \$3,500 after twenty years. The monthly pay of lieutenant colonel, colonel, and brigadier general is \$333.33, \$375, and \$458.33 respectively. Officers, in addition to their pay proper, are furnished with a liberal allowance of quarters according to rank, either in kind, or, where no suitable government building is available, by commutation. When traveling on duty an officer receives mileage for the distance traveled; the amount allowed is sufficient to cover all expenses of journey. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at government expense. Mounted officers, including all officers of the medical corps, are provided with forage, stabling, and transportation for horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the commissary and fuel from the quartermaster's department at about wholesale cost price. Instruments and appliances are supplied in abundance for the use of medical officers in the performance of their duties. Well-selected professional libraries are supplied to each hospital, and standard modern publications on medical and surgical subjects are added from time to time; current issues of a number of representative medical journals are also furnished for use of medical officers.

Examination and Appointment. Appointments to the medical corps of the army are made by the president after the applicant has passed a successful examination before the Army Medical Examining Board and has been recommended by the surgeon general. Due notice of the meeting of the board is published in the medical journals.

Permission to appear before the board is obtained by letter to the Secretary of War, which must be in the handwriting of the applicant, giving the date and place of his birth, and the place and State of which

he is a permanent resident, and inclosing certificates, based on personal acquaintance, from at least two reputable persons as to his citizenship, character, and habits. The candidate must be a citizen of the United States, between twenty-two and twenty-nine years of age, in the case of a candidate applying for appointment from civil life, and between twenty-two and thirty-four years of age in the case of a candidate who has served honorably in the army of the United States, either as a commissioned medical officer of volunteers or as an acting assistant surgeon during the war with Spain or since. He must be of sound health and good character, and a graduate of some regular medical college, in evidence of which his diploma will be submitted to the board. The scope of the examination includes the morals, habits, physical and mental qualifications of a candidate, and his general aptitude for service; and the board will report unfavorably should it have a reasonable doubt of his efficiency in any of these particulars.

The physical examination comes first in order, and must be thorough. Candidates who fall below sixty-four inches in height will be rejected. Each candidate is also required to certify "that he labors under no mental or physical infirmity or disability which can interfere with the efficient discharge of any duty which may be required." Errors of refraction, when not excessive, and not accompanied by ocular disease, and when correctible by appropriate glasses, are not causes for rejection.

The professional examinations are conducted by both written and oral questions, upon anatomy, physiology, chemistry, hygiene, pathology and bacteriology, therapeutics and materia medica, surgery, practice of medicine, obstetrics and the diseases of women and children. Examinations are also conducted at the bedside in clinical medicine and surgery, and operations and demonstrations are required to be made by the candidate upon the cadaver.

Hospital training and practical experience in the practice of medicine, surgery, and obstetrics are essential to candidates seeking admission to the medical corps of the army, who will be expected to present evidence that they have had at least one year's hospital experience, or the equivalent of this in practice.

Candidates presenting a degree in arts, sciences (other than medicine) or literature, those who hold first-class teachers' certificates or who submit evidence of graduation from a reputable high school or similar institution (approved by the board), will not usually be examined in other than the professional subjects enumerated above. Should a candidate, during his professional examination by the board, present evidence of a deficiency in his general education in elementary subjects,

he may be required to undergo an oral examination in arithmetic, history, geography, literature, and physics, and such examination, if unsatisfactory, will be cause for his rejection.

Candidates claiming especial knowledge of the higher mathematics, ancient or modern languages, drawing, analytical chemistry, or branches of natural science, will be examined in those subjects as accomplishments, and will receive due credit therefor according to their proficiency.

To save unnecessary expense to a candidate desiring a preliminary physical examination, written authority may be given by this office for him to present himself at the nearest military post, garrison, or recruiting station for such examination. Any opinion given as to the result of such preliminary examination must, however, be considered as purely advisory and not as determining the subsequent action of an Army Medical Board in the case.

The merits of the candidates in each of the several branches, and also their relative merit as evinced by the results obtained from the entire examination, will be reported by the board, and in accordance with this report approved candidates are appointed to existing vacancies or to such as may occur within two years thereafter. An applicant failing in one examination may be allowed a second after one year, but not a third. No concession can be made for the expenses of persons undergoing examination, but those who receive appointments will be entitled to travel allowances in obeying the first order assigning them to duty.

As a result of the large increase of the medical corps recently authorized by Congress, there are now one hundred and twenty-three vacancies; medical men desiring to enter the military service have therefore an unusual opportunity for so doing. Candidates should at once place on file at this office such papers as are required by the terms of this circular. Successful candidates who have had previous service, either as commissioned medical officers or as acting assistant surgeons, will have precedence in appointment over those without previous service.

To illustrate the general character of written questions submitted to candidates under examination, a few examples from the records of an army medical examining board recently convened are hereto appended.

Approved:

ELIHU ROOT,
Secretary of War.

GEO. M. STERNBERG,
Surgeon General.

WAR DEPARTMENT,
SURGEON GENERAL'S OFFICE,
WASHINGTON, February 4, 1901.

EXAMPLES OF WRITTEN QUESTIONS.

Anatomy. 1. Describe the origin, insertion, and action of the several muscles attached to the scapula.

2. Describe the origin, course, branches, distribution, and relations to other organs of the nerves of the arm and forearm.

3. Describe the anatomy of the palm of the hand.

4. Describe the origin, course, branches, distribution, and relation to other organs of the internal pudic artery.

5. Describe the anatomy of the ankle-joint.

Physiology. 1. Tell what you know about the cerebral localization of the functions of motion, and locate some of the so-called motor areas.

2. What are the functions of the thyroid gland and the consequences of its removal?

3. What is the composition of atmospheric air and of expired air?

4. Give a list and a short description of some of the animal albuminoids.

5. What is urea? What is the normal quantity in proportion to body weight? How is it estimated?

Surgery. 1. Give in detail the preparatory and several following steps of a so-called aseptic surgical operation.

2. What is the nature and origin of pus? What is sepsis and also antisepsis?

3. Describe Chopart's amputation through the foot, with diagram.

4. Give the points of diagnostic differentiation in cases of lupus ulceration, syphilitic ulceration, and epitheliomatous ulceration.

5. Describe the different methods of procedure for the reduction of luxations of the head of the femur.

Hygiene. 1. What is the normal amount of CO₂ in the atmosphere, how much of this gas is considered admissible in inhabited apartments, and how is the amount determined?

2. What amount of cubic-air space per bed would you consider a suitable allowance in a hospital ward?

3. What substances in well or river water indicate, by their presence, contamination from excreta or other organic matter of animal origin?

4. How is the hardness of water estimated, and to what is it due?

5. What are the constituent alimentary substances in milk, and how does cow's milk differ from human milk?

6. What vegetable products used as food contain the largest proportion of carbo-hydrates, and what the largest proportion of proteids?

7. What parasites dangerous to man may be present in the flesh of animals used as food?

8. How would you disinfect the excreta of patients sick with cholera or typhoid fever?

Obstetrics and Diseases of Women and Children. 1. Describe briefly the usual mechanism of a breech presentation; what dangers are to be guarded against and what difficulties to be met?

2. Under what circumstances is premature delivery demanded, and how would you perform it?

3. What symptoms would lead you to suspect the presence of a uterine fibroid? State how an exact diagnosis can be made in such cases.

4. What measures preventive or remedial would you use in a case of puerperal convulsions?

5. What early symptoms indicate probable onset of the chief eruptive fevers in children? In which does temperature range highest, which has the shortest period of incubation, of invasion, of eruption?

Pathology and Bacteriology. 1. What are the different stages of exudative inflammation, and what the products of such inflammation?

2. What are the causes of thrombosis, what the composition and varieties of thrombi, and what changes may they undergo?

3. What pathological changes are found in the spinal cord in posterior spinal sclerosis?

4. What changes occur in the liver as a result of chronic interstitial hepatitis?

5. What bacteria are commonly found attached to the diseased valves in mycotic endocarditis?

6. What are the morphological and biological characters of the bacillus of diphtheria, and what are the evidences of its etiological relation to this disease?

Therapeutics, Materia Medica, Toxicology. 1. By what various agents may antipyresis be produced? Give an example of each class of antipyretics, and state how it acts.

2. In a case of typical acute pleurisy, state the indications for treatment in its several stages and how *you* would meet them.

3. What is salol? Give its physiological action and therapeutic uses.

4. Give the source and therapeutic uses of cocaine, the dose in each case, and its dangerous effects.

5. With what condition is poisoning from opium most likely to be confounded? How would you make a diagnosis, and how treat such a case?

6. What are the poisonous effects of the lead salts? How is their presence detected? State briefly *your* plan of treatment.

Practice of Medicine. 1. Give an account of the etiology, symptoms, physical signs, and differential diagnosis of lobular pneumonia.

2. Give an account of the etiology, physical signs, and treatment of empyema.

3. Give an account of the etiology, symptoms, differential diagnosis, and treatment of dilatation of the stomach.

4. What are the causes and symptoms of intestinal obstruction, and what is the treatment?

5. What are the causes and results of mitral stenosis, and how would you recognize this condition?

6. Give the differential diagnosis between smallpox and measles.

Chemistry. 1. How may hydrogen be obtained? State its color and odor, and its weight as compared with an equal volume of atmospheric air under similar conditions. What is meant by "similar conditions" in the last sentence?

2. How would you obtain a jarful of carbon dioxide for experimental purposes? How would you recognize that the jar contained carbon dioxide? What is its chemical formula? its molecular weight?

3. What is that which is known popularly under the name of "laughing gas?" What is its formula? How is it prepared?

4. What is an anhydrid? Give the names and chemical formulas of two anhydrids.

5. How is sal ammoniac prepared commercially?

6. What chemical action takes place when copper turnings are heated with sulphuric acid?

7. What are the principal ores of zinc? What is the formula for zinc chloride? For zinc sulphate?

8. What is glycerin chemically?

9. Explain the chemical action which takes place when gunpowder is exploded.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, February 1, 1901, the President, Louis Frank, M. D., in the Chair.

Chancre of the Tonsil. Dr. S. G. Dabney: A young man came to me in the last few weeks with an ulcer on his tonsil, in a rather unusual situation, because it lay between the right tonsil and the posterior palatine fold. I have long been of the opinion that I heard Dr. J. M. Mathews express before a recent meeting of the Louisville Surgical Society that any well-defined, sharply outlined ulceration of mucous membrane (and this is especially true about the throat) is not a simple affair, but it means either cancer, tuberculosis or syphilis; and as this young man's appearance and his age were absolutely contra-indicative of cancer, and there being absolutely no evidence or history of tuberculosis, I assumed this ulceration was syphilitic.

It did not look like an ordinary tertiary sore, and at first I was considerably at sea as to the exact nature of the trouble. He was given very little in the way of treatment. I gave him small doses of iodide of potassium, rather leaning to the opinion that it was probably an unusual form of tertiary ulceration.

Three weeks after he first came to see me he began having general glandular involvement, the glands of the neck were enlarged, and there was considerable tenderness just above the elbow on one side; I found an enlarged gland there also. He had a pretty well-defined eruption on his skin; a typical secondary eruption somewhere between three and five weeks from the time he first appeared at my office.

In view of these developments, I told the young man I was inclined to think the ulceration in his throat was a chancre, and asked him if he knew of any way by which he had acquired the disease, by drinking-vessel or any thing of that kind. He stated that his room-mate was suffering from syphilis just now, and he recalled having time and again smoked his room-mate's pipe, and it occurred to me that was the mode of transmission of the disease.

This is the first case of chancre of the tonsil that has fallen under my notice, and the young man's symptoms were not absolutely typical of chancre or of syphilis. To confirm the diagnosis I sent him to an

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

experienced genito-urinary specialist. He was also positive that the lesion was a chancre of the tonsil.

I think the case is worth reporting simply as a rare one of chancre of the tonsil, and also to suggest that perhaps we are not always as careful as we ought to be about warning our patients, particularly young men, in regard to accidents such as this young man had. The character of the sore was an ulceration situated between the tonsil and the posterior palatine fold, not very deep, and, as far as I could feel, I can not say that it was very hard. Perhaps the hardness of a chancre may be more difficult to detect in that situation than it would be in the structures of the penis. It was covered with a grayish surface, and was about the size of a five-cent piece.

Discussion. Dr. T. C. Evans: Three or four years ago I reported to one of the Louisville medical societies three cases of chancre of the tonsils, all of which came under my observation within twelve or eighteen months. I had never seen one before and have seen none since. I believe Dr. Ray saw two of the cases with me. One of them was in the person of a young physician, another was in a young laboring man, and the other case occurred in an old lady, aged sixty-three years. She had a rather superficial ulceration of the tonsil; at that age it will be remembered there is not much tonsil tissue left to be involved by a chancre. It was not deep, but extended over a considerable surface. I treated it for a week or ten days, rather under the impression that it might be a tertiary lesion, although she gave no history of syphilis. Secondary eruption was delayed until very late in the disease, coming on probably at the end of the third month after the initial lesion; but when it appeared it was a typical eruption; the old lady had palmar psoriasis, paronychia, etc. A grandchild of this woman contracted the disease, having a chancre of the lip, and went through the typical symptoms. Notwithstanding the fact that she was warned both by the family physician and myself in regard to the danger of kissing this child, or in fact any one else, she evidently thought we did not know what we were talking about; at any rate she paid no attention to our instructions, and the little child developed chancre and went through the typical and characteristic symptoms of the disease. In the chancres of the tonsil that I have seen bubo of the neck has been the most constant and most typical symptom, glandular enlargement of the neck being marked and painful.

I also reported at the same time one case of chancre of the tongue. My experience with extra-genital chancres has been that the syphilis which follows them is more severe than that which follows the ordinary genital chancre.

I am not very familiar with the statistics, but believe that the tonsil is one of the most frequent sites of chancre about the mouth. Next to the lips it appears to be the most common location for chancre. In the cases I saw the induration was not marked, and I do not believe it is a characteristic of chancre of the tonsil to be indurated. In none of my cases did the patient know how the disease had been contracted. The lady stated that some time before coming to see me she had in her employ a servant whom she suspected had syphilis.

In this connection the literature of the subject refutes the old idea that these chancres are contracted by bestial practices; they are in the vast majority of instances accidentally contracted.

Dr. J. M. Ray: I have seen three or four cases of chancre about the tonsils. One was an unfortunate case; a young lady was engaged to be married, and, I think, contracted syphilis from her sweetheart, and came to see me with a chancre on the tonsil. A few weeks before the time set for the marriage she had a typical secondary eruption. In all the cases of chancre of the tonsil that I have seen there has been enormous gland infiltration about the neck and in front of the ear.

A young man from Central Kentucky came to me with a large sloughing ulcer of the tonsil; the whole tonsil seemed to be involved in the ulceration, with an enormous gland infiltration starting in front of the ear and running down the side of the neck. This was during the life of the late Dr. Palmer, and I sent the young man to him. The gland in front of the ear became so enormously enlarged that his family doctor thought there was pus in it, and made an incision; but there was no pus, simply a gelatinous mass. It made a very ugly sore, which was a long time getting well.

Another case I saw in the University Dispensary; a young woman from the "red light district," who was pregnant at the time, had a typical chancre of the tonsil; she went through the stage of eruption, etc., and was delivered afterward of a healthy child.

Dr. J. A. Ouchterlony: The reporter did not state whether there was any elevation of temperature in the case to which he refers. Usually when glandular enlargement has occurred the syphilitic fever is considerable. The most excessive glandular enlargement I have

ever seen in a case of syphilis occurred in a patient at the city hospital not many years ago. It was almost like a case of adenia, and syphilitic fever lasted for a long time. It was so marked (103° to 104° F.) that I reported the case at the time.

Dr. William Cheatham: Some years ago a gentleman came to me with mydriasis. He had been taking trips to Europe a year or two before, and came to me complaining of mydriasis, and later he developed some symptoms of locomotor ataxia. I accused him of having had syphilis, which he denied. Some months after that his wife had a sore on her tongue, and a surgeon in the city had all arrangements made to amputate the tongue, thinking it was an epithelioma; she fell into the hands of one of our syphilographers, who diagnosed chancre of the tongue, and put her on anti-syphilitic treatment, followed by complete recovery. The doctor was doubtful about where the woman contracted the chancre until I told him about having seen her husband some time before with mydriasis, etc. The husband afterward said that the only sore he ever had was on his tonsil.

I saw not long ago a case of chancre of the tonsil in an actress who was playing with a company which passed through here. My experience has been the same as that of Dr. Evans in regard to glandular enlargement associated with chancre of the tonsil; it is very great.

Dr. S. G. Dabney: In the case I have reported the glandular enlargement was not very great; it was very painful, because there seemed to be enlarged lymphatics just under the muscles at the back of the neck, and every time the patient turned his head intense pain would be caused. But the case was not nearly so well defined as those that have been described here to-night, and, as I said, I was sufficiently in doubt to have the opinion of a syphilographer to confirm my diagnosis, because neither the local evidence in the throat nor the glandular involvement was exactly typical, and but for the eruption which developed in due course I would have been inclined to think it was a tertiary lesion.

I did not take the young man's temperature. He remarked a few days ago that he felt very much better than he had a week or two previously. I think probably he had some rise of temperature in the beginning of the glandular involvement.

Fixation of the Kidney through an Abdominal Incision. Dr. A. M. Cartledge: I would like to call attention to a recent experience I have

had with fixing the kidney through an abdominal incision. At the recent meeting of the Southern Surgical and Gynecological Association Dr. McRae reported a case he had operated upon for appendicitis, and found that the patient was also the subject of a displaced and movable right kidney. By extending his incision for the appendicitis operation to the loin he was able to fix the kidney through the same incision without making an additional incision in the usual site for a nephorrhaphy.

In the early part of December I operated upon a young woman who had an undoubted history of several attacks of appendicitis, and she was also the subject of a movable right kidney. The last attack of appendicitis was quite severe, and she was convalescent at the time from that attack. The appendix was removed through the ordinary incision, and I found by extending the incision a little further I was able to strip off the parietal peritoneum from the wall and get in a nice situation for stitching the kidney. I also found that it was much easier to anchor the kidney in this way than through an incision in the loin, which we are in the habit of making. I used chromacized gut, placing in three stitches in the usual way, incising the capsule just as I would had I performed the ordinary operation in the back. I have every reason to believe this procedure will do just as well. The wound was closed without drainage, as I am in the habit of doing when I perform the posterior operation. The patient did uninterruptedly well, and I believe we should adopt this procedure more frequently than we do. We often find movable kidney associated with other troubles about the pelvis and about the appendix. It is entirely feasible. At the time Dr. McRae reported his case I thought the incision would be very long, but such is not the case. By extending the ordinary incision for appendicitis about one inch, using retractors and long forceps, with the hand you can hold the kidney where you want to; you can readily strip up the peritoneum, and suture this way easier than you can by making an incision and getting the kidney in place posteriorly. We may frequently operate upon cases of appendicitis in the female and find that there is a movable kidney by searching for it. In the case I have reported the movable kidney was giving considerable trouble in the intervals. For several years I have been noticing in certain cases of slight irritation about the appendix several layers of thin adhesions about the cecum. In some cases these adhesions are caused by a movable kidney. The constant irritation gives rise to a deposit of

adhesions along by the cecum which is characteristic. I had occasion to operate upon a remarkable case not long ago, a dumb-bell kidney displaced in the pelvis. The whole posterior peritoneum was covered with these adhesions. The case was entirely inoperable so far as restoration to proper position of the kidney was concerned. The site of the left kidney was down behind the rectum and was felt as a tumor, the diagnosis not being made until after the abdomen had been opened. I incised the posterior peritoneum to determine the bridge of kidney tissue between the two parts. I take it this has been there all the girl's life, and the ureters were so shortened as to prevent any attempt at correction. The same condition of adhesions was present in this case that I have seen in cases of displaced kidney.

Discussion. Dr. L. S. McMurtry: Dr. Cartledge's report reminds me of a very interesting case I have met with in the last year, not by analogy but by his allusion to the kidney.

I saw a young lady, twenty-six years of age, unmarried, last July, who had an extensive abdominal tumor. It was apparently an ovarian cyst of irregular outline, occupying the entire abdomen. There was deep-seated fluctuation, and I felt confident it was an ovarian cystoma. I opened the abdomen and found that the uterus and its adnexæ were perfectly healthy, and this large tumor consisted of double cystic kidneys. The urine had been examined before, and has been repeatedly since, and gives no suggestion of any disease of the kidney. I closed the abdomen without removing anything, and the patient made a good recovery from the operation. The interesting feature of the case is that the tumors have apparently not increased, and the general health of the patient is excellent. She is going about, seems to be quite well and enjoying life.

Dr. Louis Frank: I would like to call attention to the recent work of Morris on renal surgery, in which a number of cases are stated where the disease of the kidney existed for a long time, several cases being reported of operations being done where there were cystic kidneys, many of them with stones, without the trouble having been suspected. One or two cases I remember in which a large cystic kidney had been removed followed by death of the patient, and at the post-mortem a cystic condition of the opposite kidney was found with almost complete destruction of the kidney and blocking of the ureter with stones. In many of these cases they did not have symptoms of stones in the pelvis

of the kidney; in some of them it was only discovered on post-mortem examination, and in others a condition of supposed healthy kidney was discovered upon operation. I merely call attention to this in connection with Dr. McMurtry's case as illustrating how much damage we may have in the kidney without its being suspected.

Referring to Dr. Cartledge's case: I have little experience with the operation for fixation of the kidney, and am personally familiar with only a few cases; but from a study of the literature I am not favorably impressed with the operation. I do not see the necessity in many of these cases for fixation, as the kidney symptoms are of such slight character, and we know they are so prone to recur that there has not been much benefit from operative intervention.

Referring again to Morris, who is recognized as an authority in surgery of the kidney, he states that there has been no means of fixation for an ordinary movable kidney which will give absolutely ideal results; either that they break loose from the adhesions and we find the movable condition returning later, or if fixation itself is of such a character that this does not occur, the fixation itself gives rise to symptoms. They have attempted to split up the muscles and fix the kidney in this way, but all successful (?) operations have given rise to trouble which is just as severe and just as uncomfortable to the patient as the condition resulting from the slight mobility of the kidney itself.

Referring to the particular method of operating as mentioned: I think if fixation were to be done, it would not be difficult to accomplish by the plan mentioned by Dr. Cartledge, because we know the upper angle of the incision made for an appendicitis operation is not more than one or two inches below the lower border of the kidney. It strikes me that by this plan the operation would be easier than to operate through the thick muscles of the loin.

Dr. A. M. Cartledge: Bearing out the statement that has been made about the absence of renal symptoms as evidenced by urinary examinations in the presence of large cysts and obstructed ureters. About this time last year I reported to this Society a large kidney tumor the diagnosis of which was uncertain; the urine was examined and reported to be normal. I made an incision over the tumor in the right side and found that it was a retro-peritoneal tumor, and incising the posterior layer of the peritoneum it was found to be a retention cyst of the right kidney. I dissected it out quickly down to the ureter, tied the ureter off and removed the tumor, and closed the wound. The

patient was put to bed in good condition. Examination of the specimen proved it to be a large kidney containing a quart of pus, with a stone as large as a guinea's egg in the pelvis and the ureter, completely blocking it up. The patient made a good recovery. There were no urinary symptoms in that case.

Dr. J. A. Ouchterlony: I want to call attention to the fact that cystic degeneration of the kidney is always bilateral; true cystic degeneration is never unilateral.

The essay of the evening, "The Eye: Its Appendages in Bright's Disease," was read by William Cheatham, M. D. [See page 209.]

Discussion. Dr. S. G. Dabney: First, in regard to the percentage of cases that show retinal involvement—I speak of that as being by far the most frequent and most typical lesion of the eye present in Bright's disease. It is difficult to get at the percentage, for the reason, as Dr. Cheatham mentioned, that sight is often good, and no doubt a great many cases of Bright's disease go on to a fatal termination without any ocular examination having been made. The books state that somewhere from 15 to 35 or 40 per cent of cases have involvement of the retina.

In regard to the prognostic value, it is generally stated that those cases of albuminuric retinitis, excluding cases of pregnancy, and perhaps excluding acute Bright's disease following some of the infectious fevers, generally terminate fatally inside of eighteen months. I remember one case where the patient lived four or five years, a young man, who was able to attend to his business up to within a few months of his death; he was about thirty years of age. Usually the prognosis is certainly very bad. In typical cases we are pretty well warranted in making a diagnosis of Bright's disease, with white spots radiating around the macula; generally involvement of the optic nerve, and some retinal hemorrhages. I have seen one or two cases, one in an elderly lady, in which this condition of the retina existed in retinitis diabetica, but there was also albuminuria.

I recall another case that came to me for relief of persistent headaches, a young woman between twenty and thirty; she had presented no symptom whatever except the headache; her sight was perfect, yet when I looked into the eye the condition was typical, and I felt sure examination would sooner or later disclose proof positive of ne-

phritis. I sent a note to her family physician suggesting urinalysis; Bright's disease was discovered; she died within a year.

I want to take occasion to mention two or three cases which occurred in one family. A good many years ago an elderly physician who lived in Brandenburg, Ky., asked me to come down there and see his wife, and told me she had Bright's disease; he also stated that she had marked eye symptoms. I found in that case that she did not have albuminuric retinitis, but the eye symptoms were chiefly due to the fact that she was very nervous, and had shut herself up in a dark room. The gentleman told me that some years previously he had brought his daughter to this city on account, I think, of headaches. Dr. Cheatham saw her, and, upon examination of her eyes, told him she had Bright's disease. She died of this disease within twelve months. Some years afterward the doctor himself, the third member of the family to have kidney disease, asked me to examine his eyes with the view of changing his glasses. I looked into his eyes and found that he presented the typical lesions of Bright's disease; he died six months later.

One of the questions which presents itself to the doctor in these cases is whether or not he shall tell the patient. It is a question which is open to debate. I told this gentleman; I did not tell the lady, but wrote to her family physician. I told the doctor that I thought he had Bright's disease. He consulted Dr. Cecil, as his physician, and he died the following February, I think, so that as a rule the prognostic indications in these cases are very bad.

A word about conjunctival hemorrhages: We all see them frequently, and I am in the habit of giving my patients the advice that if they recur a few times, and if there be edema anywhere, they ought to have their urine examined. I do not insist upon the urine being examined at the first hemorrhage into the conjunctiva.

I do not believe I have ever seen paralysis of the external muscles of the eye due to Bright's disease. I have not made a routine practice of having the urine examined in these cases. Most of the cases I have seen have been either syphilitic or rheumatic.

Dr. J. M. Ray: We all see frequently cases in which the first intimation we have of any kidney disease is suggested by examination of the eye. It has been my experience, however, that the retinal and nerve changes are not always typical. I see cases in which there are none of the striæ of the retina, and yet examination of the urine shows the presence of albumen.

While the paper was being read I recalled to mind an elderly gentleman who is coming to me now, whom I saw first two years ago with extensive retinal hemorrhages. I think from his history he must have had them some time before I saw him. The hemorrhages have not been large, but have been multiple. A hemorrhage will clear up, leaving a white opaque spot in the retina. In this way he has gotten the whole retina studded with these white spots. I have never seen in this man's eye any of the typical striæ that we find around the macula. The fellow-eye has a large corneal opacity, making it impossible to see the fundus. I wrote a note to the family physician when I first saw this man suggesting the possibility of this being kidney trouble, and he reported that examination of the urine had been made and nothing abnormal found. The man went along for a while and then returned with a lot of fresh hemorrhages; I again suggested to the family physician that there was probably some kidney lesion, and received the same report as before. The patient is still coming to me, and it has been two years since I first saw him, and he still has retinal hemorrhages. It has been six months since I had his urine examined, and the report was "nothing found."

There is a case coming to the University Clinic now—Dr. Ouchterlony has made the case the subject for a clinical lecture—a colored woman, who has considerable edema about the lids. Dr. Lederman first saw her and made the diagnosis, and asked me to look at the patient. She has in one eye a typical Bright's retina, and in the other eye, instead of having the typical appearance, she has a fundus studded with small dot-like hemorrhages. In looking at the case I remarked that one eye seemed to be a Bright's retina and the other looked like a diabetic retina. The woman has both albumen and sugar in her urine.

An interesting class of cases are the ones following pregnancy. They nearly always clear up, and unless the woman becomes pregnant again her chances are favorable, so far as vision is concerned, in my experience.

Dr. J. G. Cecil: I am sure we all appreciate the significance of ocular examinations in the diagnosis of Bright's disease, particularly in that form which is so insidious in its beginning, interstitial nephritis. I think often the report from the physician in a case, even when referred to the physician by the specialist, as not being confirmatory of the suspicious appearance of the eye, comes from the fact which is well known to all those who make examinations of urine in this particular

class of cases, that it is only by persistent and repeated examinations of the urine that we get positive evidence of interstitial nephritis. It is an easy matter to find a man with interstitial nephritis in which the urinary examination would be negative. A negative diagnosis should not be made upon one examination of the urine, nor even upon the second, if there are other symptoms to bear out the assumption that Bright's disease exists, because we all know it is by repeated and continued examinations that we will be able to clear up the diagnosis in these cases.

If I understood the paper correctly, I am a little surprised at the prognosis given by the essayist in interstitial nephritis; when the diagnosis is made by the specialist by the appearance of the eye, that the time these patients live should be so short. Interstitial nephritis is a disease which, while it is not very amenable to cure—perhaps none of the cases are ever cured—is of a chronic character; yet my observation appears to bear out the statement that they do not all die, or at least a great proportion of them, within eighteen months after the diagnosis is made.

A point about which I would like to inquire is, does it appear that there is any thing in that class of cases of interstitial nephritis when the symptoms are first shown in the eye to make the prognosis worse? If so, my attention has not been called to it before, and I would like to hear that feature of the subject elaborated a little further. It is nothing unusual for a man with interstitial nephritis to live for many years, if he lives the correct kind of a life.

Dr. J. A. Ouchterlony: The question put by Dr. Cecil is one that naturally suggests itself, and I think the explanation is this, at all events it is my experience: eye symptoms do not occur very early in interstitial nephritis; it is of comparatively late development. And I am sure that my experience agrees with Dr. Cheatham's. I remember one case in evidence, a gentleman who had not seen his family physician, who happened to be myself, but came to Dr. Cheatham to see about his eyes. Dr. Cheatham discovered very pronounced retinal lesions, and sent the man to me. We both made a very unfavorable prognosis, which was received with very bad grace; the family was very much displeased; at all events, neither Dr. Cheatham nor myself were ever connected with the case after that, which suggests the propriety of being a little reserved as to both diagnosis and prognosis.

One point that interested me in the paper in connection with the

remarks that have been made was the subject of cystic degeneration. This is a disease in which I have taken a great deal of interest. All the cases of cystic degeneration I have seen have died of uremia, yet so far as I know nothing is said in the books about ocular symptoms in connection with that disease. I would like to know from some of the ophthalmologists of the Society if that is not so. It seems to me there ought to be some experience in that direction. The diagnosis of cystic degeneration is not always easy, certainly not easy in the early stages of the disease. I remember one case that came under my notice; a man was supposed to have syphilitic disease of the brain, but it turned out that he had cystic degeneration, two of the largest cystic kidneys I have ever seen. When the eye symptoms become prominent I think the prognosis is always very bad.

I remember a case of Bright's disease of pregnancy where frequent examination of the urine was absolutely negative. All of a sudden I was called to the house, and found the patient with that wasky pallor indicative of renal disease; she had nausea, headache, etc. I saw her about 11 o'clock and made an examination of the urine, finding it loaded with albumen, and there were numerous casts. About 1 o'clock convulsions began and continued to recur until she died.

I believe it a good plan to get the aid of the oculist whenever there is a suspected case of renal disease, for the reason not only that it aids in confirming the diagnosis, but the revelations of the ophthalmoscope are of decided prognostic value.

Dr. S. G. Dabney: Dr. Cecil asked me whether I found marked ocular symptoms in the wife of the physician at Brandenburg, and I told him that I did not. I stated that the chief ocular symptom was photophobia, which she had induced by staying in a dark room. The lady is still living, and still has photophobia, but Dr. Cecil says she has no nephritis. It is a little odd, however, that both the father and daughter should have had Bright's disease, and in both the diagnosis was first made by the ophthalmoscope, and both died within a year afterward.

In regard to the albuminuria of pregnancy, this has been impressed upon me by the death of a patient lately with her second child. I do not know the cause of death. I saw her when in her first pregnancy, three years ago in June. She was sent to me for examination of her eyes. She was then in the fifth or sixth month of utero-gestation, and I found marked albuminuric retinitis, the sight of one eye being

reduced to one sixth of what it ought to be, being two thirds in the other. Labor was induced, followed by puerperal mania lasting several months. She was sent to a sanitarium in Ohio, and made a perfect recovery. I saw her frequently after her return, and her vision was perfect; it was astonishing to see how the retinal lesions had cleared up. She died this winter, and, I have heard, was again pregnant. I do not know the cause of death.

Dr. J. M. Ray: A year or more ago I read a paper before this Society in which I reported cases of retinal hemorrhages, one occurring in a well-defined malarial subject and two in cases of profound anemia, one of them following pregnancy or during the period of lactation. In the paper referred to I stated that years ago, when I was a hospital interne, Dr. Agnew made the statement that he could not recall a case of retinal hemorrhages in a person over fifty years of age that lived over three years. After I started in practice myself I always gave a very guarded prognosis in cases of retinal hemorrhages in people past middle life. But I have seen a number of cases live indefinitely after retinal hemorrhages in people of this age, and as my observations increase the number of these cases increase. I believe that we see numbers of cases of arterio-sclerosis that present retinal hemorrhages in which there is no kidney disease, and yet the appearance of the fundus is strongly suggestive of Bright's disease; examination of the urine has failed to discover any kidney disease. I have a case on hand now, a gentleman who came to me a month ago with the statement that one eye was blurred, and asked me to examine it. I examined the eye and found a number of retinal hemorrhages. I referred him to the family physician, and made the suggestion that the ophthalmoscopic appearance was indicative of kidney disease, as was also his history, habits, etc., but the report was that a number of examinations of the urine had been made and no kidney disease discovered. The case went along until I was sent for again, to see him in consultation with two other doctors, and, upon examination, I found both eyes the seat of enormous hemorrhages. I understand now the man is in coma with hemiplegia. I report the case simply as one in which the condition of the fundus was strongly suggestive of Bright's disease, and the chances are the hemorrhages in the retina result from degeneration of the walls of the blood-vessels.

Case of Pneumonia. Dr. J. G. Cecil: I have under observation a case of pneumonia which has interested me very much; it followed the

grip in a young woman twenty-six years of age, of tuberculous history, who has had three previous attacks of pneumonia. This woman was seized with evidences of pneumonia on Sunday a week ago. I did not see her until the following Wednesday; then she had the typical appearance of grip, nothing else. On the second day after I saw her there was bronchial breathing and evidences of pneumonia in the base of the left lung; in two days after that she had signs of consolidation of the right lower lobe; a day or two afterward she had evidences of consolidation of the right apex. She has maintained all through this a very steady heart, which has given me hope that she may eventually pull through. The heart has ranged from 100 to 130, with an average of 120. Respiration has gone as high as 60 to the minute, with temperature between 101° and 104° F. This is about as extensive involvement of lung tissue as I have ever seen for the patient to live as long as she has. She has now passed the critical time, and resolution is taking place in the first lobe involved. I think it must be this feature of the case which has enabled her to live. She became markedly cyanosed many times, which has been relieved by oxygen gas. The strength of the heart has been looked after with one-fortieth grain doses of strychnine every three hours, nitroglycerine when cyanosed, and whisky *ad lib*. I hope to have the pleasure of reporting the recovery of this case at a future meeting.

Amputation of the Hip (continued report). Dr. W. O. Roberts: A short time ago I reported a case of amputation at the hip-joint a few days after the operation was performed; amputation was done for injury received in a railroad accident. I merely wish to state that the man has made a complete recovery and has returned to his home.

Head Injury (continued report). Dr. Louis Frank: At the last meeting of this Society I reported a case of head injury in which trephining was done. I think Dr. Grant mentioned at the time that the danger of suppuration was still to be considered. The wound since then has suppurated, not, however, extending to the deeper structures, merely involving the scalp. There was extensive suppuration two days after the last meeting, which was two weeks ago, and the man presented some marked symptoms of impairment of the arm and leg of the opposite side; also impairment of the muscles of motion about the face. There have been no symptoms referable to the tongue or of the eye, but there is loss seemingly of muscular power of the muscles of the

jaw. About a week ago his temperature went up to 103.5° F., and he complained of severe headache, accompanied by inability to swallow, inability to open the mouth, and he suffered pain down the spine. I was inclined to think he was going to have an attack of tetanus, but under sixty grains of bromide of potassium every three hours he has improved; the temperature came down so that since Monday morning of this week it has been normal; his muscular power is improving; he is now walking about, and complete recovery will probably result in a short time.

Post-Anesthetic Paralysis (continued report). Dr. Turner Anderson: It may be interesting to know the further history of the case of post-anesthetic paralysis of the arm which I reported two months ago. I am pleased to tell you the patient is now pursuing the course predicted at the time and endorsed by the Fellows of the Society. She is slowly improving; gradually getting the use of her arm. It is now nearly three months since the operation, and she is able to close her fingers and move them at will.

B. A. ALLAN, M. D., *Secretary.*

COLLEGE OF PHYSICIANS OF PHILADELPHIA—SECTION ON OPHTHALMOLOGY.

Meeting December 18, 1900. Dr. George C. Harlan, Chairman, in the Chair.

Dr. G. C. Harlan showed a patient with myosis and ptosis, due to a gunshot injury of the right cervical sympathetic received five years ago. The right pupil responded promptly to light, but was 2 mm. smaller than the left either in contraction or dilatation. The edge of the upper lid covered the upper margin of the contracted pupil. There were no other symptoms and no history of unilateral sweating. Under homatropin mydriasis the pupils retained the same relative size. The voluntary movements of the lid were normal. The patient was wounded from in front while in a stooping position and leaning forward, and the scar of entrance of a rifle ball was on the anterior margin of the sternomastoid at about the level of the cricoid cartilage. The ball, which was never traced and could not be located by X-ray examination, probably grazed the carotid and passed downward and backward.

Dr. James Thorington exhibited a boy, fourteen years old, with subluxation downward and inward of each lens. Vision—R. E., fingers at 14 inches; L. E., light-perception. R. E., cornea clear; anterior chamber deep, especially up and out; pupil round, 3 mm. in diameter; T—2. Under atropin pupil dilates vertically oval, 6×7 mm., showing transparent lens subluxated, the upper and outer periphery being 2.5 mm. from pupillary margin. Eye-ground healthy. The refraction through the pupillary area unoccupied by the lens is $+13$ S., with slight astigmatism, and in other portions by the lens -45 S. $\ominus -15$ cyl. axis 75. The estimate was obtained with the retinoscope, the point of reversal being at 8 inches. V. with this combination was $\frac{5}{80}$. The ophthalmometer showed 1 D. cylinder, axis 90. The probable cause of the myopia was the subluxation of the lens, permitting it to assume an almost spheric shape, the rotation of lens on its vertical axis likewise resulting in the astigmatism.

Discussion. Dr. Hansell had seen a patient with congenital dislocation in which the myopia amounted to 18 D., with 8 D. of astigmatism. Dr. Harlan said that the high myopia in these cases simply emphasized the Helmholtz theory of accommodation.

Dr. C. A. Veasey reported a case of restoration of useful vision in a complicated case of acute inflammatory glaucoma of ten days' duration, with visual acuity reduced to the perception of light. The patient, an unmarried female, forty-two years of age, had glaucoma in L. E. six years previously, which, notwithstanding continued medicinal treatment by an oculist, had progressed to an absolute glaucoma. The present attack was in R. E., and when first seen by the writer on the ninth day, V = light-perception. The usual palliative treatment failing to ameliorate the condition, an upward iridectomy was made on the following day. Some vision was restored, and the eye became comparatively quiet. The lens continued to swell, however, and in a couple of months iritis and secondary glaucoma supervened. The lens matter was extracted, and with correcting glasses $V = \frac{5}{40}$. A year and a half later the patient returned with a closed pupil and reduced vision, for which an iridocystectomy was performed, $V = \frac{5}{80}$.

Dr. H. F. Hansell reported a case of tuberculosis of the conjunctiva in a healthy child thirteen years of age. The diagnosis was based upon the microscopic examination made by Dr. E. A. Shumway that demon-

strated a central area of necrotic tissue surrounded by mononuclear cells and by cells of an epithelioid type, with many giant-cells. The growth was covered by thickened conjunctival epithelium and subconjunctival tissue, was hyperemic and infiltrated. No tubercle bacilli were found. Examination of the literature showed that five forms of the affection were recognized; that it is more frequently a primary than a secondary manifestation; that relapses are prone to occur, and that early removal of the diseased tissue offers the best means for permanent cure. Several cases have been reported in which traumatism of the conjunctiva was the only apparent cause of tubercular infiltration at the site of the injury. If excision is not practiced early, the preauricular and submaxillary glands become involved. The diagnosis rests upon the discovery of tubercle bacilli, upon the production of tuberculosis in animals after inoculation of the excised tissue, and upon the microscopic examination of the structural tissue changes.

Dr. W. M. Sweet exhibited a piece of iron imbedded in inflammatory exudate removed from the vitreous by forceps after failure of magnet. The patient, a boy aged twenty, was struck in L. E. two months previously while chipping a boiler-rivet. The physician who examined the eye a few hours after the accident advised him that there was nothing in the eye, and, after prescribing a wash and keeping him at home for a month, said he could return to work. So much pain and discomfort followed the use of his eyes for near-work that he was compelled to stop after three days. He came to the Jefferson Hospital on December 13th, at which time the pupil was moderately dilated, and the iris bellied forward in lower outer quadrant. A scar in the cornea and sclera could be plainly seen. In the lower outer portion of the vitreous was situated a mass of exudate over which a number of blood-vessels could be traced. The mass seemed to be attached to the lens and to the ciliary body. Uncertain light-perception with detachment of retina over other portions of fundus. Radiographs indicated a metallic body in the lower outer portion of vitreous, near ciliary body. The next day an attempt was made to remove the metal through an incision in the sclera. The flat extension point of the Hirschberg magnet attracted the body and drew it to the lips of the scleral wound, but failed to dislodge it. While the magnet held the body near the scleral opening, Dr. H. F. Hansell grasped the metal with forceps and removed it. The body was imbedded in a mass of tissue to which was firmly attached the crystalline lens. Dr. Sweet reported the case as

another evidence of the importance of positive and early diagnosis—whether by the X-rays or other means—in all suspicious injuries of the eyes from pieces of metal.

Discussion. Dr. Hansell called attention to the point that had been frequently manifested before the Society, of which this case was additional proof, namely, the necessity, in order to save useful vision, of the immediate removal of a foreign body that had perforated the coats of the ball. After vision had been destroyed and the eye degenerated, as shown by the opaque lens, fluid vitreous, detached retina, and large masses of exudation, the extraction of the metal could save only the ball, whereas immediate extraction might have saved both the ball and the sight. He alluded to the usefulness of the injection of physiologic salt-solution in collapsed eyeballs. In Dr. Sweet's case the vitreous chamber had been emptied of its fluid contents during the operation. Before the introduction of the sutures, two syringefuls of salt-solution had been injected, and after the final conjunctival suture and closure of the wound the hypodermic needle was again inserted into the incision and more solution injected, so that at the conclusion of the operation the eyeball had regained almost its previous form and size. During the healing, which was uneventful, the shape of the ball was restored and maintained. Dr. Risley said that the disappearance of the sympathetic irritation upon the removal of the mass of exudate was an important point in the case, and thought that possibly the contraction of this mass, dragging as it did upon the lens and the ciliary processes, was probably a factor in the cause of the irritation.

WILLIAM M. SWEET, *Clerk of Section.*

EXPERIMENTS ON INTESTINAL SUTURE.—Walter Edmunds and E. C. Stabb (*Lancet*) have made a number of experiments on dogs to determine the best method of circular suture of the intestine. The methods contrasted were by use of (1) Halsted's inflated rubber cylinders, (2) Murphy's button, and (3) Taplace's intestinal forceps. Seven experiments by each method were made, with the result that all seven dogs in which the Halsted cylinders were used recovered, with the Murphy button only five recovered, and of the seven with Taplace's forceps only four were successful. The failures were due to non-union. As far as the above results go, the verdict is entirely in favor of Halsted's method.—*American Journal of Obstetrics.*

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PARASITE OF CANCER.

In a letter recently written to Prof. W. H. Wathen, of this city, by Professor Roswell Park, of Buffalo, N. Y., he says concerning the parasite of cancer:

... We have an extraordinary chain of evidence, with observances extending over two years, and I think only needed to be welded together by some fresh link, which Gaylord suddenly found, or thought he found, the other day, in the observation of protozoa in vaccine lymph, which run through their life history in comparatively few hours, which life history proves to be an epitome of the life history of certain organisms which we have been getting from cancer for years, which is an exceedingly slow one—so slow as to have been exceedingly deceptive. That, at least, is the way in which it appears to us at present.

With the above evidence in the hands of two such observers as Professor Park and Dr. Gaylord, it would appear that the actual discovery of the parasite of cancer is only a question of time. With the discovery of the parasite which produces this most fatal disease, let us hope that its nature will be such as to enable us to find a ready destroyer for the germ that will not be fatal to human life.

KENTUCKY STATE MEDICAL SOCIETY.

The Kentucky State Medical Society will meet in this city May 22, 23, and 24, 1901. We are assured by the Committee of Arrangements that every thing is in readiness for the reception of members and the profession at large. The program is one of the best that has been presented for years, and it is certain that a scientific and literary treat is in store for those who attend. Clinics will be held at the hospitals of the Kentucky School of Medicine, the Hospital College of Medicine, and the University of Louisville for the benefit of the visiting members of the profession. Every thing will be done to make the stay of the visitors pleasant and profitable.

Current Surgical and Medical Selections.

OLIUM RICINI (CASTOR OIL).—By Dr. W. I. Cottell, at the Tenth Annual Meeting of the Oregon State Pharmaceutical Association.

This is a fixed oil, expressed from the seeds of the *Ricinus Communis* (Linne). The best is obtained by cold expression. Remington says: "It is an almost colorless, transparent, viscid liquid of a faint, mild odor, a bland and afterward slightly acrid and offensive taste. It is soluble in an equal volume of alcohol, and in all proportions in absolute alcohol and glacial acetic acid. When exposed to the air in a thin layer it dries to a varnish-like film. If 3 c.c. of oil be mixed with 3 c.c. of carbon disulphide and 1 c.c. of sulphuric acid, the mixture should not acquire a blackish-brown color (absence of many foreign oils)."

There is perhaps no other drug in the pharmacopeia whose therapeutic value is so well established. For over two hundred years it has held sway at the head of cathartics and laxatives; it is especially indicated in all the diseases of childhood, in all inflammatory diseases of the bowels, and it comes nearer being a panacea, a catholicon, for all complaints than any other article. It may be used internally, externally, and eternally, and with confidence on the part of the counter-prescriber that its use will not arouse the ire of the physician. Few objections can be offered against its exhibition. It is safe, sure, and harmless; it is mild in its action, seldom producing griping if fresh and pure. It produces copious liquid stools in from one to two hours. As a heavy oil it acts mechanically, and it contains a certain acrid principle which has not as yet been isolated, which aids its action.

It does not lead to the formation of any pernicious drug habit, and it lightens the burdens of the young and the old, lubricates and allays friction

in all kinds of cranks, and it is equally good for greasing both bowels and boots.

I have chosen this drug for consideration to-day on account of its familiarity. You all dispense it. Its very name suggests repulsion and nausea. When the physician calls for castor oil in the household, ten to one he finds it in a dirty, dusty container, perhaps full of dead flies, brought in from the woodshed, where it has served for years for greasing wagons and boots, rancid, dirty, and drastic; unfit for medicine.

The pharmacist is to blame in a large measure for the odium which hangs over this valuable household remedy. It is an oil; it soon becomes rancid. The best quality is none too good. Use the brilliant or crystal; buy it often; see to it that it is fresh; keep it clean, and in tightly-closed containers. Half the castor oil on the market is only fit for lubricating purposes. If you will go home and smell of your castor oil cans, some of you, I am certain, will find that you have no first quality oil in your pharmacy. If your oil is rancid or full of flies, or dirty, throw it into the No. 2 can and sell it for greasing. Do not have it forced down the reluctant throats of innocent babies.

Most of you keep it in cans or barrels exposed to the air. It is an oil. Butter or sweet oil would lose their palatability under the same conditions. Does your oil can send forth a stinking savor? If your oil is pure and clean, put it into clear, clean bottles and make it as presentable as possible, and children will not refuse to take it, though some adults may object to its "richness." But if not administered with a look of disgust and commiseration on the face of the one who gives it, it will usually go down as sleek as goosegrease, if not more so. Adults may rinse the mouth out with brandy before and after taking, and thereby numb the sense of taste; or it may be flavored with oil of anise or cinnamon, or flavored with saccharine, and if taken from a warmed cup it may be easier to down.

I pass around for your inspection a sample of the best oil obtainable in this market. It is not yellow; it is nearly colorless, and it is not bad to take. It smells sweet; it is bland, and not in any way disagreeable. I also pass a test-tube which contains a sample of impure oil, which has been subjected to the disulphid of carbon test. If you smell it you will not soon forget this simple test for purity. The grocer that sells rancid or impure butter for first-class goods would soon lose his patrons. Why? Because most people know good butter. It is not so with drugs. Many do not know what a prime article is; they rely on your judgment and your honesty. Are you worthy of their confidence in dealing out this drug, in dispensing all your drugs?

In the name of humanity (the sick and the well), I beseech you to look into the purity and quality of every thing you sell. Let your castor oil and all your dealings be above reproach, and always advise the use of a remedy of established value—one that is safe, sure, and efficacious.—*Pacific Drug Review.*

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE PROGRESS OF SURGERY IN THE NINETEENTH CENTURY.*

BY WILLIAM O. ROBERTS, M. D.

Professor of Principles and Practice of Surgery and Clinical Surgery in the University of Louisville.

Gentlemen: We stand upon the threshold of a new century—a century of which the world expects great things, because the century just closed has brought to light more truth in science than all the previous ages taken together. An inspection of the rich findings of that period will reveal many gems that belong to medicine in general and to surgery in particular.

My theme is: The Progress of Surgery in the Nineteenth Century. A fitting theme indeed for so auspicious an occasion. For you are the University's first gift to the new century. Backed by her authority and decorated with her honors, she sends you out of the old into the new, where she expects you to do your part like men in making the twentieth century the worthy successor of the nineteenth.

That the great achievements of this period may be duly accentuated, let us look at the beginnings of surgery and its developments in classic and medieval times, while we consider especially its condition at the beginning of the nineteenth century.

It is not unlikely that surgery had its rude beginnings among primitive man, although the relics and remains of prehistoric times reveal no trace of it; but savages to-day carry their wounded from the battle-field, and this implies care and remedial measures. The applica-

* The Doctorate Address of the Medical Department of the University of Louisville.

tion to wounds of soot and cobwebs by the common people and the similar rude measures found so effective in the recent war between China and Japan are doubtless survivals of primitive surgery.

In the classic ages of Egypt, Greece, and Rome no mean progress was made in surgery. The surgical skill and knowledge evident in the works of Hippocrates and his followers and the surgical instruments and appliances unearthed in the ruins of Pompeii and other ancient cities hold the wonder and admiration of the surgeons of to-day.

But whatever was gained in classic times was destined to be forgotten or lost in the intellectual darkness that settled down upon Europe in medieval times. Galen was the last great light of antiquity. He died in the second century. And from his time till about the middle of the seventeenth century, when Harvey discovered the circulation of the blood, there were no epoch-making discoveries in medicine or surgery. Geniuses now and then appeared—and genius never rests till it has raised its own craft, art, or profession, and through it the human race, to a higher plane.

When we compare the achievements of surgery in the nineteenth century with what it did in the preceding ages we are reminded of Solomon's maxim: "There is nothing new under the sun." For although the surgery of the nineteenth century has distanced that of all preceding times in the brilliancy, directness, and effectiveness of its offices, it must be admitted that in the technical details of its work it is beholden to the discoveries of the past, while its splendid new departures which characterize our own day rest upon one epoch-making idea, one physiological discovery, and two mechanical appliances, namely: Asepsis, which is Greek for cleanliness; anesthesia, the annulment of pain, and certain simple devices which insure bloodless operations.

Thus, long before the circulation of the blood was understood, Celsus, who was living at the time of Christ, recommended the ligation of arteries, double ligations in some instances, and the cutting of vessels between ligatures. This kindly and effective way of controlling hemorrhage was apparently forgotten until the sixteenth century, when Ambroise Paré, the greatest military surgeon of old days, by a lucky accident rediscovered the device. He and his contemporaries believed the measure to be a new discovery, and Ambroise Paré gained much praise and some blame. This rediscovery of an ancient device marked the beginning of a beneficent era in surgery, since it replaced the barbaric custom of stopping blood with boiling oil.

Archigeries, of Apamea, who was near the era of Celsus, was accustomed to bind a bandage around a limb above the point of amputation, thus anticipating by seventeen centuries the Esmarch bandage. Aetius in the sixth century employed the torsion of arteries for the arrest and control of hemorrhage, foreshadowing that clever surgical device which to-day makes operations bloodless.

But these measures were in advance of their times, and surgery relapsed into barbaric practices, which it continued till Ambroise Paré revived the ligature and Harvey discovered the circulation of blood. Harvey's discovery made the reason for these classic procedures scientifically clear and marked an epoch in surgical advancement, a point from which no retrogressive step could ever again be taken.

We justly hold in reverence the name of Ephraim McDowell, the great Kentuckian, who planned and did successfully the first ovariectomy; but if we are disposed to be airy over the conceit that laparotomy, the surgical glory of this era, is the fruit of the acumen and invention of our time, we should be reminded that 340 years before Christ, Erasistratus daringly laid open the abdomen that he might apply remedies directly to affected parts.

To dampen pride still more we should note that Zacharelli, of Palermo, in 1549 boldly extirpated the spleen, and successfully, too, his patient making a complete recovery in less than three weeks. But to crush the modern surgeon's vanity literally to the earth, let it never be forgotten that not even the operation for the cure of appendicitis can be called our own, since Praxagoras in 335 B. C. gives specific directions for operating in what he denominated the "iliac passion," which affords the strongest presumptive evidence that he was dealing with appendicitis. Cesarean section was common in the tenth, and Pierre France did a supra-pubic lithotomy in the sixteenth, century.

The tourniquet was introduced by Morel in the last quarter of the seventeenth century. And this invention, by making the control of hemorrhage from large vessels easy and certain, marked another real advance in surgery. Seeing, then, that from time almost immemorial surgeons with no mean skill have ventured to invade all accessible parts of the human body, what glory remains for the nineteenth century? What has its enterprise and invention to exhibit in surgical venture, skill, and success?

We should not suppose that because Hippocrates was expert in setting fractures and reducing dislocations; that because Celsus and

Ambroise Paré ligated arteries, and Aetius twisted their cut ends; that because Archigeries esmarched the limb before amputating it; that because Erasistratus did laparotomies and Zacharelli splenectomies; that because Praxagoras operated for appendicitis, and Pierre France cut for stone, while splints, suspension apparatus, the tourniquet, torsion forceps, speculums, and many other surgical instruments and appliances were invented and in use in remote antiquity and in medieval times; we should not therefore suppose, I say, that these things were the common heritage of the surgeons of those days.

For then there were no means for the rapid diffusion of knowledge—no newspapers, no medical journals, no railroads, no telegraph, no telephones. People living within a few miles of one another were virtually as far apart as those now separated by oceans and continents. The surgeon of ancient times could hardly gain by years of weary travel and laborious study what now every fresh fledgeling in medicine finds ready to his hand and at his door.

The ancient common practitioner of surgery was a blundering barbaric empiric, while his descendant and inheritor in medieval times was a barber, who added to his proper professional duties the then questionable offices of blood letting, bandaging, manipulating, etc. He was called a leech and held in contempt by physicians and the upper crust of the society wherein he did his humble work.

The high standard of intelligence and manipulative skill which the operations, instruments, and appliances here described imply, belonged only to the favored few—the geniuses of those dark days.

“ For in those dark and iron days of old
There rose among the pigmies of their age,
Minds of a massive and gigantic mould;
Which we must measure as the Cretan sage
Measured the pyramids in ages past,
By the far-reaching shadows that they cast. ”

Though impeded by the dense ignorance which surrounded them on every hand, and though overshadowed and often obscured by the spirit of superstition which was the ruling force in their day, these great men scaled the lofty heights of learning and of thought, and passed the word of truth forward from age to age, like signals of war from mountain peak to mountain peak, until in our day the circumference of its destination has been reached, and the army which camps in

the lowlands and covers the plains has caught the message and taken up the resistless march.

And now let us see what was the common plane of surgery at the beginning of the nineteenth century. The surgery of the ancients was almost lost sight of in medieval times, even the most learned scarcely knowing that it ever existed. The word *Chirurgion* (surgeon), a title of honor in classic times, was disregarded and fell into disuse, the terms barber and leech being deemed of sufficient dignity for the characterization of those who practiced surgery in those days.

This state of affairs continued until the latter half of the eighteenth century, when the barber's and the surgeon's offices became distinctly separated, and surgery may be said to have fully emerged from barbarism, in more senses of the word than one. At this time many forces were at work for the enlightenment of mankind.

The doom of tyranny had been pronounced; America had broken the shackles of her oppressors, and the man of the third estate had come to the front and entered upon his God-given inheritance—freedom. The French revolution in its red madness had given tyranny, hide-bound dogmatism, and blind custom a terrible jolt. A general scientific awakening followed, and surgery, with this rich inheritance, began its brilliant nineteenth-century career.

Her development was further facilitated by the marvelous improvements in transportation and means for the dissemination of knowledge. Patients were brought from distant places with ease and safety to the eminent surgeons of the great medical centers. Every new invention and operation was forthwith made known to the guild of the entire civilized world, and became a part of every physician's duty and practice.

As "things grow by what they feed upon," surgery, nourished and developed by the rich findings of multitudes of workers, rapidly advanced toward perfection, and soon took lofty rank among the beneficent Arts and exact Sciences, thereby easily distancing her older companion, medicine, in brilliancy of execution and certainty of results.

I said at the beginning of this discourse that modern surgery owed its great facility and effectiveness to three things: Anesthesia, asepsis, and improved measures for controlling hemorrhage—or bloodless operations. These are the tripod on which to-day surgery rests, and they are the beneficent gifts of the nineteenth century.

The fact that operations could be painlessly performed revolutionized operative surgery and raised it from cruel practices to tender ministrations with blessings to the afflicted that can not be numbered or described. But it not only disabused surgery of the element of cruelty; it did far more. It enlarged immensely the surgical field and brought into the ranks a multitude of clever operators who never could have acquired that quickness of manipulation which was the *sine qua non* of the surgeon of old days.

It is no longer the aspiration of the young surgeon to rival Marschal, who could perform eight lithotomies in a half-hour, or match the manipulative facility of von Langenbeck, who disarticulated a shoulder-joint while his colleague had turned to take a pinch of snuff. Careful, slow, painstaking men could now enter the ranks of surgery with the certainty of becoming successful operators.

The enlargement of the surgical field made possible by anesthesia is immense. It is limited practically only by the anatomical limits of the body. There is no organ or viscus that may not be inspected by the surgeon, or entered, if need be, by his instruments. And thus injuries are reached and remedied, and diseased structures removed, in cases that before the days of anesthesia were inoperable and necessarily fatal.

The complete control of hemorrhage, making surgical operations bloodless, is another nineteenth century triumph which redounds to the glory of surgery. Although, as I have stated, Archigeries did anticipate the Esmarch device when he bandaged a limb previous to amputation, he was far from the rubber bandage and fillet of Esmarch, which enables the surgeon not only to guard against hemorrhage when he divides the vessels of a limb, but previously to express the blood of the limb back into the general circulation, and thus save to the patient a considerable amount of that vital fluid which he will need to help him to weather the shock and other incidents of the operation. The other measure which secures bloodless surgery in almost all other operation is the pressure forceps of Sir Spencer Wells. These and the Esmarch appliances may be said to have made operative surgery bloodless, and they are another of the princely gifts of the nineteenth century.

The third epoch-making gift of the nineteenth century to surgery is asepsis, or the art of keeping out of the operating field, during operation and in the after-treatment of the patient, the germs of disease.

The discoveries of the bacteriologist afforded the data for experiment, and to Lord Lister belongs the honor of having conceived the idea of excluding noxious germs from the surgical field, and the credit of having first devised and put in practice means to this end.

Lister's first thought was to destroy germs in the operative field, and his first measures were the employment of carbolic acid, corrosive sublimate, and other chemical germicides. He believed the air to be full of pus-making and blood-poisoning microbes.

His position was vehemently attacked and his measures doggedly disregarded by Lawson Tait, of Birmingham, who made light of microbes and laughed antiseptics to scorn.

Tait showed his faith by his works, and, discarding all measures to the end in view except soap and water, proceeded to do capital operations in numbers and with results that made him the glory and the despair of the surgeons of the world, while the manufacturing town of Birmingham became the Mecca of all would-be laparotomists. But while Tait astonished the world with the boldness of his teachings and the brilliant success of his operations, he did not long lead surgical thought. A more careful study of the subject proved that Lister was right in his ground idea, to wit: that bacteria caused operations to be followed by suppuration and sepsis. The danger from germs in the air had been exaggerated; the danger from germs in the patient's grosser surroundings remained; but the application of chemical antiseptics to freshly cut tissue was to destroy or impair their vitality, with often serious consequences.

The correct reading of the facts in the case, to the truth of which testimony is borne in thousands of successful operations, is that the operating-room and appointments must be kept scrupulously clean, while all utensils, instruments, dressings, and ligatures must be sterilized. The surgeon and assistants must wear gowns, aprons, and caps fresh from the sterilizer, while the skin of the patient covering the operative field and the hands of the surgeons and assistants must be scrubbed with soap and water and further cleansed with chemical antiseptics before the operation is undertaken. In short, it is antiseptics before and aseptics during the operation. These facts being established, the luster of Lister's name remained undimmed; through his great idea surgery had made a splendid advance, and the surgical world was brought to see that pus was never laudable, that all forms of sepsis following operations were a disgrace to surgery, while the secret of suc-

cessfully operating with avoidance of these sequelæ was, in short, *cleanliness!*

Dirt and disease go ever hand in hand. The surgeons of classic antiquity were cleanly, and hence the success of their daring invasions of the cavities of the human body; but it took Christian Europe the better part of seventeen hundred years to learn that dirt and divinity could not walk gracefully together, and that the secret of health is cleanliness. This most salutary and sanitary truth is the nineteenth century's best gift to surgery and to humanity. Without this simple, sublime revelation surgery would be handicapped and invidiously conditioned in all its capital operations, with immeasurable loss in human life.

Another discovery of significant and direct bearing upon surgery is phagocytosis. It was the work of the great Russian pathologist, Metschnikoff. In 1882 this observer found that invading germs were actually attacked and destroyed (eaten) by certain white corpuscles in the blood. Thus it appears that our bodies are protected against the incursion of hurtful microbes by a well-ordered army or police force within us, who not only rush into the breach and devour the invaders, but build a wall or fortress between the field of attack and the healthy tissue, and thus prevent their entering the blood.

Metschnikoff's discovery has important bearings upon the surgical management of accidental (non-operative) wounds, while its physiological beauty and pathological significance must fill the philosophical mind with wonder and reverence for the works of God.

But time would fail me now to do scarcely more than read you a list of the many lesser gifts of the great closed century to surgery.

Orthopedic surgery was named in the seventeenth century, and was practiced to some extent in olden times; but its successful offices in the correction of deformities which in other times were considered hopeless were reserved for one of the gifts of the nineteenth century.

The spinal jacket, the plaster bandage, and many other clever mechanical appliances are no small part of the legacy. The aseptic suture, in all its beautiful and curious varieties, and the many ingenious ways of stitching which these suggest, is another theme for eloquent discourse.

The whole field of gynecological surgery, never dreamed of till that great American, Marion Sims, began and rapidly perfected his brilliant original work, is another pregnant theme.

The splendid specialty of ophthalmology, with its marvelously daring and delicate operative work, and the great name of Von Graefe linked immortally with it, suggest volumes to the medical historian.

Local anesthesia and spinal anesthesia, enabling the surgeon in minor operations with the first, and in major operations below the waist line in the second, to operate painlessly in persons to whom it would be dangerous to administer a general anesthetic, such as ether or chloroform, register two more beneficent gifts.

Cerebral localization, which enables the surgeon to open the cranial cavity and remove tumors from the substance of the brain itself (the very citadel of life), is another source of glory.

And still another triumph is the substitution of the infusion of normal salt solution for the transfusion of blood. Transfusion was first practiced in 1492. It fell into disuse, but was revived again in 1824. It consisted in injecting (or allowing to run from artery to vein) the blood of one person into the vessels of another for the restoration of patients in jeopardy from loss of blood. It is now possible to effect the same purpose without danger to the patient by substituting a solution of common salt for the dangerous blood. The salt solution may be injected directly into the veins, infiltrated into the subcutaneous connective tissue, or thrown into the rectum. Thus has an operation unphysiological and often fatal been replaced by one that is physiological, safe, and effective, and many a useful life is saved thereby.

But, gentlemen, the major contributions of the century to surgery here commented upon are not a "tenth part of a tithe" to the numberless minor devices, appliances, operations, and instances which mark and are an integral part of the growth of surgery during the hundred years of grace last past. Time will not permit even their mention at this speaking. Suffice it to say that the genius of the nineteenth century found surgery a lost and orphaned child living a disgraced, or at least equivocal, life among doubtful companions, and, taking her tenderly by the hand, led her out of the slums into the palace of the King and seated her side by side with her elder sister, medicine, where, fostered by science, clad in the robes of humility, and crowned with the garlands of immortal renown, she ministers to man in his sorest need, and proclaims truth to the coming ages.

LOUISVILLE.

THE CAUSES OF DEATH AFTER ABDOMINAL OPERATIONS.*

BY LOUIS FRANK, M. D.

Professor of Abdominal Surgery and Gynecology in Kentucky University, Medical Department; Visiting Surgeon, Louisville City Hospital; Gynecologist to Broadway Infirmary, etc.

The great dread of the laity to all operations is a fatal result, and it is also true that, notwithstanding the almost perfect technique of our methods and the almost ideal attainment of complete asepsis by the operator, death is an outcome still feared by him, and one which has terminated cases at all times in the hands of all men, even the best, who are doing abdominal and pelvic surgery. Such a termination is not a reflection upon the surgeon when one considers the oftentimes desperate condition of the patient or the extensive pathological changes for the relief of which operation is done, and that our work is not selective, but that we must as a duty attempt to relieve and save when often we feel that the chances are much against a successful outcome. It is equally true that in clean cases death from one of many causes can be avoided, and that its occurrence is an indication of an imperfection somewhere in our technique.

I have been induced to introduce this subject of "Why Our Patients Die" as a result of a few recent observations in literature and reports before societies, not, however, before this one. We can usually learn something from fatal cases, and I trust that a review of the subject as mentioned will not be amiss. I am well aware that many men throughout the country are prone to leave unreported fatal cases, and personally know of some that have even been reported as recoveries, in which to my certain knowledge the patient had died. I and we all know that cases of septic infection have been reported as cases of death from exhaustion, heart failure, etc.; what the motive for this, I leave you to infer.

In my paper I shall mention several cases having some bearing upon these points, which I have carefully analyzed or studied from symptoms or post-mortem. Some of these cases are taken from my records during the time I was curator to the City Hospital, which position offered excellent opportunities for post-mortem work. My own mortality is not above that of surgeons generally who do any work, and I have had a number of deaths, all of which I have carefully studied, and all of which I can explain; but I must say there are none due to

* Read before the Louisville Medico-Chirurgical Society, February 15, 1901. For discussion see p 264.

exhaustion without an underlying factor as a cause of the exhaustion which was not dependent directly upon the operation.

With this preface I will consider the causes of death, classifying them according to their action and as to the relative time of occurrence post-operative.

1. *Operation Per Se.* Under this heading I would include those deaths due to (a) shock, to (b) primary hemorrhage, and to the (c) accidental ligation of important structures.

(a) Shock as a cause of death is still to be reckoned, and I am not among those who believe that it always means bleeding, though it is in a degree dependent upon the blood loss; that is, blood loss increases shock. Shock is also in its extent dependent upon the length of operation and the quantity of the anesthetic. It shows itself almost invariably first while the patient is still on the table, and if not properly combated, or if not noted by the anesthetist, may become so profound that the patient never rallies, but dies without regaining consciousness. Rarely we may have secondary shock, not dependent upon hemorrhage, or shock may be continued so long that the patient dies of a continued or secondary shock.

Mrs. H., operated on for a left-sided pyosalpinx and pelvic abscess, with right-sided infected(?) ovarian cyst. Temperature 100°, pulse 120, time of operation. Rallied well from operation, a severe and prolonged one, pulse coming down to 90, temperature 99°, three hours after. At 5 P. M., six hours after operation, patient becomes restless; pulse ran up suddenly so as to be imperceptible. Extremities warm, respiration shallow, nails blue, no nausea, no perspiration. Saline infusion. No bleeding as shown by drainage. Died fourteen hours later. Post-mortem: Pelvis and abdomen clean, no serum, no blood, nor micro-organism in pelvis or general cavity. Cause of death: Secondary or delayed shock in a weak patient after prolonged and extensive operation.

From Kelly I quote case of M. W. (3296). Two and three quarters hours after operation decided pallor noticed, the mucous membranes blue, nails livid, pulse imperceptible at wrists. It had been 84 at end of operation. Respiration shallow, precordial distress, voice weak, extremities warm, no moisture on forehead, no nausea. Under strychnia, enemata of coffee and brandy, she improved, but did not become normal for five days.

Case M. D. (3320). Symptoms came on on the second day, the pulse ranging to 150 on the third day, and not going below 100 until twelve days.

He states these cases may have possibly been due to hemorrhage, but in my own case post-mortem revealed no bleeding.

(b) Primary hemorrhage rarely occurs, but may as a result of slipping of a clamp or a ligature on a large vessel or an insecure control, or in cases of extra-uterine gestation with a widely attached placenta, especially if the placenta lies above the sac and must be incised or opened into to reach the fetus. The symptoms are plain.

(c) *Accidental Ligation of Important Structures.* In this category I place ligation of an intestine or of an ureter. The former accident will soon be discovered and with the characteristic signs of such lesions, that is, those of intestinal obstructions, which manifest themselves early, and it may be possibly remedied. If not recognized, and unless nature relieves by a fecal fistula, the case dies with vomiting or intestinal paralysis.

Case (—). Observed in autopsy-room after vaginal hysterectomy. The intestine had been caught in blade of clamp; necrosis resulted after seventy-two hours, though clamp was removed in forty-eight hours. Death; belly full of feces.

Ligation of ureter has also happened in hands of the best surgeons, as has its division in enucleation of a pelvic tumor. Pain and continued diminution or suppression of urine may lead to its discovery, and it must be differentiated from Bright's. It is said that unfortunately the diagnosis is usually not made until the autopsy, and at this time it is too late to apply suitable treatment. Possibly critical analysis may reveal some cases of so-called suppression of urine as a cause of death, due to this at times unavoidable accident.

2. *Death Due to Anesthesia.* (a) Death on the table from anesthesia is one of the most deplorable accidents which may happen, and may occur at any time to any one without a moment's warning. This very fact should make us careful in saying to a patient, as is sometimes done, when we are asked as to the danger of an operation, "there is absolutely no danger," for there is always in every case this danger constantly present.

(b) Secondary from a pre-existing kidney lesion, or primarily from an undetected heart or lung lesion. The anesthetic may produce death by increasing the work of the organ to such an extent that it can

not in its crippled condition carry it on. This necessitates a careful examination of the urinary, respiratory, and circulatory organs preceding anesthesia, and a selection of a suitable agent for use in the case.

E. B. Operation May 29, 1896, for ovarian cyst and pyosalpinx. Put to bed in good condition. Delay in recovery from anesthetic, which was ether. Through mistake no examination of urine. Urinary secretion free for twenty-four hours, then diminishing to seven and one half ounces on the third day. The temperature then began to go up, and she became semi-comatose with hallucinations. Urine now contained hyaline and granular casts, and between one and a half and two per cent of albumin. Finally complete coma. Under digitalis and other treatment she rallied, passing thirty-eight ounces of urine on the seventh day, gradually improving until her dismissal. Seen a year later, she still has chronic nephritis.

(c) *Aspiration Pneumonia* may also be classed as resulting indirectly from the anesthetic, and this septic process may in itself lead to a fatal ending.

3. *Death from Secondary Hemorrhages and Septic Processes* that is the sequelæ or consequence of operation; and here, I take it, we are to find the most frequent cause of death even to-day, with all our perfect methods. True it is that in clean cases our mortality is less than one per cent, almost *nil*, but it is equally true that in pus cases and in hysterectomies it is from two and a half to ten per cent, and it makes no difference whether this is pelvic pus or gall-bladder pus or appendiceal pus, so that we may say that in pus cases and hysterectomies our mortality is still five per cent.

It is also in this group of operative sequelæ that we have the greatest difficulty at times in deciding exactly from what cause our patient is doing badly, and even if we decide that it is due to bacteria, the exact manner of their action is not only at times uncertain or not clear, but may be impossible of perfect conception. Even the symptoms of secondary hemorrhage are at times not always so clearly defined as to be properly interpreted.

Take a case, such as the following: Uterine fibroid, total ablation; post-operative, pulse 70, temperature 98°. Eight hours later, condition good, pulse 80, temperature 99° F.; then in twelve hours more, patient vomited, pulse counted, found 120. When seen is warm, restless, nauseated, temperature 100° F., belly flat, mind clear, no sweating, no pain. Gauze drain removed from vagina; little blood only follows.

Removal of a single suture, however, reveals pelvis full of blood, and opening, an ovarian pedicle is found bleeding.

Typical cases are recognized, but if there is any doubt they can be easily cleared up by the removal of a single suture, or as a rule by pulling on a gauze drain. One member of this Society has said, and I think very truly, that he thought "many patients had been buried with their bellies full of blood and the death attributed to other causes." These cases are not so common, though they do occur oftener than supposed, and some reporters sign cause of death "heart failure," or "exhaustion."

Septic Processes. These may manifest themselves in a number of different ways, and may vary in severity, depending upon rapidity of absorption, upon the virulence of the micro-organisms present, and the condition of the patient. The symptomatology is therefore not always the same and the diagnosis not always easy. Some show themselves as toxemias, there being an absorption of liberated septic products, and they may or may not lead to a quick death. At times the symptoms may be preceded by a chill, followed by rapid rise of temperature. Usually the course is as follows: After an operation for septic local condition the patient rallies, temperature may come down, but in six or eight hours there is a sudden rise to 103° , to 104° or 105° , pulse becomes rapid; not much if any distension; nausea and vomiting occur, or delirium followed by coma and death; or if the dose has not been large, or the system overcomes the septic process, recovery results. The onset, in some instances, may be gradual. This condition must not be confounded with septicemia, where there are micro-organisms in the blood, the clinical course of which may resemble it very much. These patients may seem to be even in profound shock, and so they are, but not from bleeding or chloroform, but from sepsis. This septicemia may be slow in its progress and apparently mild, but if due to virulent micro-organisms invariably results in death, which may not, however, supervene for two, three or even four weeks, and these cases are many said to die of what? septicemia? no; but exhaustion or any old thing, so it is not sepsis.

Pyemia, so nearly allied to these two processes, has also, in my opinion, been the cause of some deaths which I have seen reported in medical journals as a "malignant malaria" which existed before operation. This latent malaria(?) is in $99\frac{9}{10}\%$ per cent of cases due to sepsis, and what more would one expect than blaming this recurrent

chill and temperature, so regular often in its periodicity, to such a cause when it at once puts the onus on the patient, or previous surroundings, while the dear surgeon has done a most successful, beautiful, and aseptic operation. The cases of post-operative pneumonia, pleurisy, meningitis and joint affections are in a large measure due to infection of this character; that is, there are septic emboli carried to these distant organs, and they are truly metastatic processes. A toxemia or septicemia is a usual concomitant of peritonitis, which latter may be of several varieties. Thus we may have a mild septic (not purulent) peritonitis with increased pulse and temperature which subside after free drainage by the bowel. Or, again, we may have septic non-suppurative peritonitis, violent in its character, leading to death in a short time.

Such a one was the case of E. T., aged eighteen, a prostitute, who was operated on for a double pyosalpinx. The patient was anemic, run down, and gave a history of having had a child ten weeks before, followed by a probable puerperal fever of mild grade. During the enucleation pus escaped into the cavity from a rupture of the tube. Went off the table in good condition; in twenty-four hours temperature went to 103.5° F., pulse 140. Belly distended. Died six hours later.

Autopsy: Belly contained some serum; serum with few flakes between coils of intestine.

Bacteriologic examination: Shows streptococci in tubes, in blood-vessels, and in fluid in belly.

Again, we may have a more rapid or virulent infection, resulting in pus formation in the belly and death in less than twenty-four hours, as the case of F. B.; operation for double pus-tubes. Post-operative temperature 99° F., pulse 80. Eight hours later temperature 101° F., pulse 120. Belly not distended, but tympanitic. Restlessness. Forehead bathed in sweat. Face pinched and drawn; some muttering, later delirium; no vomiting nor pain. Death in twenty hours. Post-mortem: Pus in incision and along sutures; about a pint of free pus in pelvis, and pus containing fibrinous flakes in belly. Micro-organism present. Staphylococci also found in veins and in arteries. Culture confirms finding of staphylococcus pyogenes aureus.

The other variety is classical and so easily recognized as to leave no doubt as to the condition, which is not true always in the above forms of poisoning, particularly if there is little or no temperature and much

shock, as is often the case from the severity of the infection itself. This latter group includes the cases which are slower, less virulent, but none the less serious. The symptoms develop more gradually and slowly. There is usually more marked distension, persistent vomiting of bile, or bile mixed with blood; the face becomes yellowish, pinched, the conjunctiva even jaundiced; usually obstipation. Temperature may range from 100° to 104° or 105° F., pulse ranging to 130 until the third or fifth or even sixth day, when death closes the scene from heart failure due to the sepsis.

Some of these slower forms of infection may even present diarrhea, as one with which I am familiar following a curettage, the patient dying on the seventh day. Never much temperature; pain not very marked, but distension, vomiting, and gradual sinking. Death may even in this class of cases be attributed by dishonest surgeons to gastritis, diarrhea, yellow atrophy of the liver, typhoid fever, or other causes equally as far removed from the true cause. This fools the public, it fools many general practitioners, but it does not fool the surgeon, nor such men as I have before me in this Society.

4. Among my fourth group of causes I would include the cases due to bad after-management. These we never see except in the hands of occasional operators. It has been said, and I know truly, that bad management may be the cause of many fatalities, no matter how skillful or perfect the operation itself. Personally my opinion is that sweet milk has done much harm to laparotomy cases. I almost lost a case after strangulated hernia from injudicious feeding with solids on the fifth day after operation. The overtaxing of the intestines is often more than they can stand. Distension or meteorismus with interference of cardiac function or paralysis therefrom may ensue, or intestinal toxemia of sufficient intensity to cause death in a weak patient.

5. Finally I would mention miscellaneous causes; those due to accidental obstruction from Murphy's button, for instance, or to a true hypostatic pneumonia, as occurred in a patient of mine sixteen days after operation. The case was one in a fat woman, weighing 275 or 300 pounds, who could lie no other way than on her back. Death resulted on the nineteenth day. We would have allowed her up in a few days more, but on account of the thick and fat wall and her size, fear of a subsequent hernia kept her in bed with the result mentioned.

Then complicating troubles may come up through the action of the nervous system, possibly on the kidneys of patients in rare cases, or a

heart the subject of a fatty degeneration or brown atrophy as is found in large tumors may quit and cause death from a true heart failure, though probably some of these cases of sudden death or more prolonged development ending in death may be due to an embolus, which should not be overlooked in accounting for the fatal termination. Then in gall-stones with long-continued jaundice, blood changes may occur, or a condition of bile poisoning may exist with subnormal temperature that may result in death from a true exhaustion or rather cholemia. As stated, however, among all these causes we find that sepsis in one of its various manifestations still claims most victories.

Could we do away with sepsis or always combat it successfully, I think our mortality would be less than one tenth of one per cent; and all this goes to show, as my friend McMurtry said in his paper before one of our local Societies a short time ago, "That while we may seem to have attained the ideal we have not done so, and surgery is still an art and not an exact science."

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, February 15, 1901, John G. Cecil, M. D., President pro tem.,
in the Chair.

Continued Report of Supposed Sarcoma of the Forearm. Dr. A. M. Vance: I have here a specimen which is of some interest in connection with the continued report of the case. Two meetings ago I exhibited a boy sixteen years of age who was supposed to have, and gave all the gross appearances, a sarcoma of the forearm resulting from traumatism, a nail which was in a board. It was then the consensus of opinion that the boy had a malignant growth, and I was of the same opinion. The advice of the Society was that the boy should be put under the influence of chloroform, an incision made, and the tumor examined; that the operative procedure should depend upon the findings at that time.

I studied the case carefully and concluded to wait a while. I put on a compression bandage and waited. It is now four or five weeks

*Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

since the boy was exhibited. Two days ago a small opening appeared at the site of the original wound, and these two pieces of wood came out; so I am inclined to think now that the whole thing was inflammatory, due to the foreign body, though the fluoroscopic examination failed to show this. I think there is probably still some pieces of wood in the arm. If you will recall my report of the case you will remember that the wound primarily healed, and the boy went for four months without a sinus or other evidence of trouble; at the end of four months the enlargement began. It was rather tender; there was no heat, no redness, and the wound of entrance had thoroughly cicatrized.

Discussion. Dr. Louis Frank: I remember the case distinctly. Of course the fluoroscopic examination would not show a piece of wood in the arm. The suggestion offered when the boy was before the Society was that the arm be opened, a section of the enlargement submitted to microscopical examination, and the nature of the operation would depend upon those findings. I think the plan Dr. Vance pursued has proven to be wiser than the plan suggested would have been, because this is one of the cases where the microscopist might have erred, as the great amount of cell infiltration might have given a typical picture of round-cell sarcoma. This was supposed to be a sarcoma, and the microscopical findings would have probably verified the clinical history and diagnosis, and an operation would have been done accordingly. Dr. Vance is to be congratulated upon his conservatism in this case; it teaches us that these cases do get well, and that nature is a wonderful doctor.

Foreign Body Removed from the Nose. Dr. William Cheatham: I have a foreign body removed from the nose of a patient to-day. There is nothing especially interesting about the case except to illustrate the simple method we have of removing these foreign bodies. It is quite a large bean, probably having become larger since it has been in the nose, and the patient's nose was very small. It is a great mistake, when the foreign body is of a smooth variety, to attempt to remove it by means of forceps. My method is to ask the mother or some other member of the family present for a hairpin, bend the end of it over in the shape of a hook, and with this instrument the foreign body can be easily removed. Forceps are usually dangerous on account of their slipping, and thus pushing the foreign body further in.

Discussion. Dr. B. C. Frazier: I would like to ask whether or not it would be advisable to introduce a catheter from behind to push out the foreign body from the nose when it was found that it could not be extracted anteriorly?

Dr. William Cheatham: This might be done with a catheter having a proper curve. We blow them out sometimes by compressed air through the other nostril.

Double Salpingo-Oöphorectomy. Dr. Louis Frank: These specimens themselves are not of much interest, but are shown as I desire to give the history of the case. They consist of the tubes and ovaries from a patient operated upon yesterday, February 14th—a double salpingo-oöphorectomy. The history of the case is of some interest as bearing upon a subject to which we have lately given considerable attention, and which has caused some discussion, namely, the condition of retroflexion or retroversion.

The patient from whom these specimens were removed is a young woman twenty-six years of age; she gives a history of having suffered for the last three or four years with pelvic pain, but more severely with pain in the back and rectum. She had never borne a child, and had been under the observation of two excellent surgeons in the city, both of whom at different intervals of a year—the last one about twelve months ago—had curetted her for an endometritis. She came to me with this history.

After a careful examination I made out the uterus, which was movable to apparently the normal extent; it was retroverted, with the cervix pointing almost directly upward toward the symphysis pubis. It could be brought down by means of a tenaculum forceps to the ostium vaginae, and could be replaced without great difficulty, but would not maintain its normal posture. With an intact perineum this was rather difficult to understand. There was much tenderness in the left side, and I thought at this point I could make out a prolapsed ovary, though of this I was not certain. On the other side the ovary and tube were easily palpable, perfectly movable, and did not seem to be bound down. With a history of prolonged suffering, however, I advised her to have an exploratory incision made, telling her I thought she would lose one ovary and tube, and possibly both. The operation was purely exploratory in the strictest sense of the word.

Upon opening the abdomen I came down upon the fundus of the uterus lying above and completely covered by the summit of the

bladder, and adherent in the anterior *cul-de-sac* was the sigmoid flexure. The omentum was also adherent at one point in the left side low down between the bowel and the anterior abdominal wall. After separating these adhesions we reached the body of the uterus; I found it adherent all along its posterior surface to the anterior surface of the bowel. It could be tilted forward easily, and was extremely movable with the fingers in the abdomen. The ovary and tube on the left side were felt presenting, but the tube and ovary on the right side could not be felt, being covered over with these adhesions. With a great deal of difficulty the adhesions were separated—they were old adhesions, there being no plastic material—some of them very thin, bled freely, and much time was required to separate them completely. After this was done the tube and ovary were easily brought up and ligated and removed. The adnexa of the opposite side was searched for and found well down and firmly adherent to the posterior leaf of the broad ligament. After separating the bowel on that side with a great deal of difficulty, the ovary was separated from its attachments and adhesions and removed. The uterus was then fixed to the anterior abdominal wall by two suspension sutures of fine silk.

The only point of interest in the case was the extreme mobility of the organs per bimanual examination, and also through the abdomen, which illustrates the point that in some of these cases where we have flexions or versions, without, we think, adhesions, they may sometimes be present. This is the first case of the kind I have seen, and the only one I have ever seen with such marked mobility with such extensive adhesions as existed here.

The specimens present the usual conditions we find in salpingitis. I think it is an old gonorrheal case, but of this am not certain. The tubes are thickened, the fimbriæ turned in, with fluid in the tubes such as we usually find. The walls of the tubes are not as hard as we sometime see; in fact, they are remarkably soft.

Miscarriage Produced by Pennyroyal Pills. Dr. B. C. Frazier: I was called four or five days ago to see a young woman twenty-four years of age, mother of one child three and half years old, who gave the history that there had been some family trouble, and she and her husband had separated. She was pregnant, and said she did not propose to bear a child with no one to look after it. She had advanced to about the end of the fifth month of utero-gestation. She was advised by some of her

friends to take pennyroyal pills. She bought a box (twenty pills) and took one three times a day until the box was gone; she then bought a second box, and proceeded with this until miscarriage occurred. She took eight or ten pills out of the last box purchased. She began the first day of January and took three pills a day until the 11th; on the 11th of January she had a miscarriage; she was very sick at her stomach; had great vomiting and retching, and a great deal of nervous depression, with evidences of hysteria. The third or fourth day after the miscarriage she said the discharge almost ceased, and about the fifth day she got up. The eighth day the discharge commenced again, and has been constant since.

When I saw her she was complaining of a great deal of pain in the left hypochondriac region; cramps were occasionally so severe that she would cry out with pain. She is now discharging fetid material—pieces of retained placenta, probably—and quite a little fresh blood at times. I propose to curette her in a few days, when her condition has been improved.

The only reason I report the case is that it seems to me very unusual at such a late date for a miscarriage to be brought about by the use of pills. I have only seen three women who had taken pennyroyal pills; two were very sick, one greatly depressed; one dislocated her jaw by the severe vomiting, and it was on this account I was called to see her. The other one had purged and vomited incessantly, and was in a very weak and collapsed condition when I saw her. In the case reported to-night there has been no fever, despite this fetid discharge.

Discussion. Dr. T. H. Baker: I do not know that I can recall a case where pennyroyal pills were taken so late in the course of pregnancy. Among a certain class of people it is common for these pills to be taken for the purpose of bringing on a miscarriage. In some cases the desired result is promptly obtained; in others there is no effect. I have never seen any ill-effects from their use.

Dr. J. M. Holloway: I have seen a case of alleged abortion from pennyroyal pills, but, when traced out, the statement was made only to cover the fact that the woman had been to an abortionist beforehand.

Dr. H. A. Cottell: Many times in the last ten or twelve years have I been told by women that they took pennyroyal pills and "came around all right." I never believed it, and the principal reason why I did not believe it is that many years ago, when I was a young doctor,

I was called to see a girl who had taken an enormous dose of the oil of pennyroyal to bring on a miscarriage. She told me she had taken probably two tablespoonfuls of the drug bought at a drugstore, and she was in a terrible condition at the time I was called. She had spasms just such as we would expect to see in strychnine poisoning, tonic convulsions, opisthotonos, etc. She would go pretty rapidly from one into another, as we know they do in strychnine poisoning. I gave her an emetic, administered chloral by the rectum, and worked with her for a while and the spasms subsided, and she went on and did not miscarry. Three or four months afterward I was called suddenly one night to see her in premature labor, which I think was brought on by mechanical means.

Under circumstances such as related by Dr. Frazier, I would be slow to believe that the oil of pennyroyal, in such small doses as would be contained in pills, would be competent to bring on a miscarriage.

Ulceration of the Tonsil. Dr. S. G. Dabney: I saw a throat case this afternoon which struck me as being somewhat out of the ordinary. The patient is a young girl, seventeen years of age; she is rather pale, looks a little flabby, but is fleshy. The physician in attendance told me he was called to see her for this trouble about a month ago. At that time she had a slight elevation of temperature (101° F.), which soon disappeared, and, so far as he has been able to discover, there has been no return of the fever.

She presented then and presents now a peculiar appearance of the tonsil of the right side. The tonsil is covered with a thick, grayish exudate, and in rubbing it off there presents underneath an ugly whitish look of the tonsil. The lymphatic glands on that side of the neck are very much enlarged, and the upper part of the larynx on that side has the appearance such as we often see in tubercular laryngitis, except it is limited to one side. It is a little redder, perhaps, than seen in tubercular trouble.

Her pulse this morning was 90 to the minute, but her physician says it is generally a little elevated. She has much pain on swallowing, and some pain when the throat is at rest. The condition has not changed under treatment, so her physician informs me. He has used nitrate of silver, peroxide of hydrogen, and all the various cleansing agents from simple saline solution through the list.

My judgment is that it is something more than a local condition, and the question is, what underlying constitutional trouble is at the

bottom of it? When the exudate is rubbed off the surface of the tonsil looks something like the condition we know as mycosis, but it is limited to the tonsil of one side. There is a little superficial ulceration on the pillars adjacent, well enough marked to be positive, however, extending down toward the larynx on that side. Microscopical examination has not yet been made, but we removed some of the secretion from the surface this evening and will submit it to the microscopist.

The case, in my experience, is out of the ordinary, and I would be glad to hear an opinion expressed about it. I am inclined to suspect tubercular trouble. Some years ago I remember a report before the American Laryngological Association of a case of epithelioma of the larynx which had an appearance similar to this. Epitheliomata in this situation are extremely rare, and many of the symptoms are lacking in this case. Her family history is good. Tuberculosis of the fauces is uncommon, and those cases I have seen did not present this appearance; it seems more likely, however, than any thing else.

Discussion. Dr. William Cheatham: Of course we naturally expect something from the microscopical examination, but I would look upon the case as one of tuberculosis. Only last week I had a gentleman from Indiana come to see me with a tonsil presenting a similar appearance—ulceration extending over on the pillars. He had lung tuberculosis, but the larynx was not involved.

The case under discussion might be one of inherited specific trouble; there is even a possibility of its being acquired syphilis, although it does not present the appearance of a chancre. The enlarged glands look suspicious. The microscope ought to assist in making the diagnosis, but I would look upon it as a tuberculous trouble.

Dr. J. M. Ray: The experience of Dr. Dabney does not coincide with mine with reference to tuberculosis of the fauces. I have found it exceedingly rare, and then in the late stages of general tuberculosis.

Dr. A. M. Vance: I would suggest to Dr. Dabney that he try this girl on anti-syphilitic treatment. She has had nitrate of silver and peroxide of hydrogen applied to the throat, which would tend to produce the whitish appearance and irritation spoken of. It is a fact that primary syphilitic sores on the mucous membranes of the mouth do not look like primary sores anywhere else. The adenitis and sudden onset of the trouble would make me believe that this is a case of acquired syphilis.

Dr. S. G. Dabney: I am so thoroughly in accord with the opinion expressed by Dr. Vance that the young lady has been placed upon the mixed treatment for syphilis. I do not believe it is a simple local condition. I have never seen a case like it where the condition was purely local. I have never seen a local condition cause so much lymphatic enlargement. The larynx looks very suggestive of tuberculosis, except that it is one-sided. The glandular enlargement is very decided.

The essay of the evening, "The Causes of Death after Abdominal Operations," was read by Louis Frank, M. D. [See page 250.]

Discussion. Dr. Turner Anderson: It would be impossible in a short talk to even touch upon all the many interesting points so nicely presented by the essayist. He lays great stress upon sepsis, and, of course, I agree that is to-day the recognized danger in all laparotomy work. We are more afraid of sepsis than any thing else; it is one of the things that will steal in sometimes despite our best efforts to prevent it, and in cases where we least expect it. I do not know that I can add any thing in regard to preventing these accidents, which, as he has said, if we could eliminate from our operative work we could reduce our mortality to one tenth of one per cent, which would render operations almost absolutely safe. It ought to be a rule in all laparotomy work never to close the abdomen while bleeding is going on; all oozing should be arrested by the Paquelin cautery, by the different measures at our command, or by even the introduction of styptics, touching the bleeding points within the abdomen. I have seen subsulphate of iron and persulphate of iron touched upon bleeding points within the abdomen without doing harm, stopping oozing that was uncontrollable by other means. That would seem a dangerous thing to do, but it has been proven that it is not. We ought to do our utmost to prevent, or reduce to the minimum, the dangers of post-operative hemorrhage by assuring ourselves that every thing is safe before closing the abdomen. It is better to allow the patient to die upon the table than to close the abdomen too hurriedly; it is better to take that risk than put the patient to bed to be resuscitated by means of hot water, hot blankets, etc.

I heartily agree with what Dr. Frank has said in regard to anesthetics. I am much afraid of chloroform. We ought never to tell a patient that there is no danger in an operation; there is danger in all surgical procedures, and I make it a rule never to state to a patient that there is no danger. We know we can not truthfully say that there

is any anesthetic which is wholly devoid of danger. There are many accidents which may occur as a result of surgical operations, and unless we are thoroughly alive to the situation from beginning to end, and guard against such accidents by the most thorough and painstaking care, a fatal result may supervene.

There is such a thing, I believe, as heart failure. It is to be seen in cases where we take patients who are overworked, underfed; they have been in stores, they have been subjected to great mental and bodily fatigue and strain; they are anemic, their pulse is frequent, they are in no condition for a surgical operation; their heart is weak. We permit these patients to go on the operating-table, and many of them meet with a very close call, whereas if we had taken these same patients and subjected them to preparatory treatment, put them in bed, toned them up with iron, strychnine, etc., by judicious feeding, etc., gotten their secretions in good condition, I believe they would have gone through the operation without any of the complications of prolonged surgical procedures.

Dr. H. A. Cottell: I think surgeons have failed to pay as much attention to the dangers of heart failure as they ought. It is a demonstrable physiological fact that rough handling of the peritoneum or any of the abdominal viscera is competent to produce great depression of the heart, and this influence may persist a long time after the operation is done.

Dr. A. M. Vance: Dr. Frank has written a timely paper, and has gone into the subject thoroughly, though I think he has overlooked some of the causes of death following abdominal operations. I have lost several patients after operations, and expect some of the deaths came under the methods mentioned by Dr. Frank. There is one fact he failed to mention to which attention should be called, namely, that death is not because of the surgeon's operation or lack of technique, but is because of septic poisoning being taken up before the surgeon is called, which explodes afterward. Take, for instance, septic disease of the abdominal cavity, and we operate between the time of the initial rupture, accident, or whatever may have caused infection—clean out every thing—and the patient goes on and in thirty-six hours dies. The post-mortem shows that the cavity is in perfect condition, and that death was due to material taken up prior to our cleansing. Those deaths are unavoidable. I know this to be true in cases of gunshot and knife wounds, and often in appendicitis, where post-mortem shows that

the toilet has been done perfectly, no evidence of inflammatory trouble being left; but the patient dies of heart paralysis, or even paralysis of the bowel due to sepsis taken up before the operation was done, exploding afterward.

Another cause he failed to mention is foreign bodies left in the cavity. I think this occurs more often than we know. I am not certain that I have ever lost a patient by a sponge being left in the cavity, but am suspicious that I have. It is a curious thing that oftentimes those cases where we are most particular in the preparation of ourselves, the patient, instruments, assistants, etc., before the operation, still the patient dies. Again, we will do a similar operation in a back alley without assistants, and without any attempt at asepsis, and the patient promptly gets well. Septic poisoning is a very puzzling affair, and there is yet much to be learned about it.

Another point: I believe it is entirely wrong for the surgeon to allow "Tom, Dick, and Harry" to jump in and assist him. For instance, a general practitioner brings us a patient; we take him into the operating-room and try to get him in shape to help us. We do not know what he has been handling previously, and it is almost impossible for him to prepare himself to assist in a surgical operation in five or ten minutes.

Another thing is that we have too many people around an operating-room. A surgeon should have just a few people as possible around the open abdomen while an operation is being performed. I have very few people—just those that are necessary—usually at an operation. We ought to allow just as few hands as possible to touch the sponges, needles, instruments, etc. The surgeon ought to thread his own needles and have his instruments where he can get them himself. He ought to look carefully at the man who stands on the opposite side of the table and see that he is clean. It is a mistake for an interne in a hospital to be allowed to visit the various wards, dress septic cases, and then come in and assist in surgical operations. We never know what his hands have been in just before an operation. The first operation may be a septic appendicitis case; the next may be a clean case of ovarian cyst, and it is hard for him to get clean between the two. There are many of these little things that ought to be watched, and conscience ought to enter into this class of work more than it does, according to my observation.

The subject is one of great importance, and more papers like that we have just heard read would do good.

Dr. B. C. Frazier: I think everybody, not only the laity but the profession, looks upon surgical operations with a great deal of fear. One cause of death, which Dr. Frank only mentioned in a casual way, is the manner in which the anesthetic is given. I mean to say that frequently the anesthetic is prolonged, and the anesthetist is so anxious, if the heart begins to flag a little he begins to introduce hypodermics of stimulants, strychnine, nitroglycerine, atropine, etc. And one other reason why he needs to do this frequently is the fact that the patient maybe has been douched, and the water about the abdomen is allowed to run down around the patient's side; the table, blankets, and clothing become wet and soaked; evaporation goes on and the patient becomes chilled without anybody observing or thinking any thing about it. The operating-room sometimes, though perfectly warm when an operation is commenced, becomes cool before it is completed, and this also contributes to chilling of the patient. Instead of introducing hypodermic stimulation, frequently hot blankets may be placed over the chest, or hot water applied and the patient kept warm and dry; frequently shock may be obviated in that manner.

One other trouble about the anesthetist is, that just before the patient is removed from the operating-table hypodermic stimulation is resorted to, and when he is put to bed his heart is in good condition; and there he fools the surgeon again, because of the stimulation he has had during the latter part of the operation. Again hot blankets and hot applications would do more good, and would at the same time reserve the patient's heart for further stimulation that might be needed twenty-four to forty-eight hours later.

Still another cause of producing shock, in my opinion, is carrying the patient through cold halls; despite the fact that you wrap him up as best you can, you take a patient out of the operating-room where the temperature is 80° F. and carry him through a long hall where the temperature is 40° F., it is bound to produce some shock.

Prolonged anesthesia: While the patient does not die from the anesthetic proper, still frequently it is a great factor in the production of shock, and especially the shock which comes on later. The surgeon is usually more to blame than the anesthetist, because he has not hurried his work.

There are many causes of death that we probably do not even recognize, and that have not been mentioned by the various speakers. It is a question we ought all to think about and act upon always.

Dr. J. M. Holloway: I have nothing to say except to refer to the subject of anesthetics. I have been in practice a long time, and last week was my first case of death from chloroform. A patient was being prepared for operation in the ante-room in the hospital, and I was sent word that he was in bad condition. The matter was entrusted entirely to Dr. Caspar, a very competent young man, and he noticed particularly that the patient's heart failed first. It is the first case in general practice or in military surgery that I have seen die from chloroform before operation. This was a case in which there was no doubt about death being due to chloroform. The man had not had any operation performed; he was able to walk in the operating-room, and we were going to operate upon him by his own request; an exploratory operation on the arm. There was no trouble about the kidneys nor the heart.

Foreign Body Passed per Rectum. Dr. T. H. Stucky: I want to exhibit to the Society a foreign body swallowed by a child two and one half years of age, and passed per rectum four days later. It is one of those toy engines, $1\frac{1}{4}$ inches in length and $\frac{3}{4}$ inch in breadth; the mother thinks it also swallowed the baggage car, but that has not reported yet. The child seemed to suffer none whatever. No precautions were taken; I simply told the mother to leave him alone and watch the dejecta.

Foreign Body in the Esophagus—Continued report. Dr. J. M. Ray: At a recent meeting of this Society Dr. Cheatham reported several cases of foreign bodies in the esophagus, and I mentioned a case I had seen in the fall, a woman who five weeks before, in eating some soup, swallowed a bone, which lodged somewhere in the esophagus. She went to a neighboring doctor, who passed a horsehair probang and apparently removed the obstruction; he pushed it down, and she was better for a while. Soreness was still present for several days, and in the course of three or four weeks swelling of the neck showed, and along with this swelling a certain amount of discomfort in swallowing. This subsided, and five weeks afterward she came to see me because of swelling of the neck. There was a great deal of infiltration on the outside overlying the larynx, extending down to the base of the neck.

I made a careful examination but could not find any trouble inside the throat, and told her I thought the swelling would subside, and I did not introduce any instrument into the esophagus. She came back to the office to-day with the history that her neck had been swollen at various times since her previous visit; that it would last a few days, and there would be during this time some discomfort in breathing and swallowing; that it would subside under the application of some preparation, and that she had not seen a doctor since her last visit until to-day. She now has an enormous phlegmon of the neck; it is almost as large as my fist; there is some pitting on pressure; evidently it contains pus, and there is great difficulty in swallowing and some in breathing. She said this had developed within the last four or five days.

Discussion. Dr. A. M. Vance: When Dr. Ray opens this phlegmon I believe he will find the bone the patient is supposed to have swallowed months ago.

Chancre of the Lip. Dr. A. M. Vance: About four weeks ago Sunday a young man twenty years of age came to see me with a sore at the right angle of his mouth. He said he had noticed it first three weeks before. The side of his face was tremendously swollen; all the glands on the right side of the neck, particularly the submaxillary, were greatly enlarged; he had a sore on the skin surface at the angle of his mouth as large as a silver quarter, extending to the buccal mucous membrane as large as a half dollar. The appearance of the sore on the mucous membrane was similar to that described by Dr. Dabney in his tonsil case.

I told the boy I thought it was a chancre, the largest that I had ever seen. I immediately put him on protiodide of mercury, $\frac{1}{4}$ grain three times a day, and told him to come back and see me the following Sunday, one week away. There was little improvement in a week, and I told him to continue the treatment and report to me in another week. That made it five weeks from the time he had first noticed the sore. He then came back and said (as they always do) that the medicine had made him break out. I found that he had at that time a typical secondary eruption all over the body. I then added to the treatment mercury externally in the form of mercury and lanolin ointment, and he is now rapidly getting well.

My reason for reporting the case is that this boy works in a large manufacturing establishment in the city where they employ 300 to 400 men. He is a very intelligent boy, and the grandfather who accompanied him is an intelligent man, and the boy told me there are twenty men in this factory who have similar sores on different parts of their bodies. It looked to me like an epidemic of extra-genital chancres.

This boy smokes a pipe, and I asked him if he had allowed anybody else to smoke it, and he said he had not. They all drink out of the same cup, however. This recalls the fact that during one year I saw nine extra-genital chancres. I have not seen that many in a long time since then, but there are a great many more extra-genital syphilitic infections than we are aware of; and that was one reason for my opinion in the case reported by Dr. Dabney.

Chancre of the Lip. Dr. H. A. Cottell: Some time last December I was called to see a young lady, a bride in prospective, who had a very suspicious sore on her upper lip about in the middle, a large, indurated, ulcerated sore, and about the genitalia there were numerous small sores which looked very much like chancroids. There were no mucous patches, and the sore was of recent occurrence when I saw the case. She was a young girl whose character was above suspicion, expecting to become a bride inside of a month. She asked me if I thought she would get well before the time for her marriage. I did not suggest to her what the nature of the trouble was.

Under treatment this sore healed rapidly. I kept a piece of lint saturated with peroxide of hydrogen and glycerine upon it most of the time, and gave her some iodide of potassium and a little bichloride of mercury internally. The other sores healed with great rapidity under the local application of peroxide of hydrogen. The wedding occurred about a month or six weeks afterward, and about two weeks, I think it was, after the marriage she sent for me again, and I found all the secondary symptoms: mucous patches about the throat, copper-colored eruption, etc. I put her then upon vigorous anti-syphilitic treatment, and she is getting well.

Now, this girl worked in a factory where they had common drinking cups, etc., and I have no doubt it was a case of syphilis ignorans. What was the origin of the sores upon the genitalia I do not know. Strange to say, the husband has shown no symptoms of syphilis.

Chancre of the Tonsil—Continued report. Dr. S. G. Dabney: Two weeks ago to-night I reported to this Society a case of chancre of the tonsil acquired in a peculiar way. The young man's room-mate had syphilis, and he smoked his room-mate's pipe. He presented a distinct ulceration of the tonsil, followed by the usual secondary eruption and decided glandular enlargements. Noyes says in regard to possibly specific cases, "when in doubt play trumps," that is, put them upon syphilitic treatment. It is a wise suggestion in all such ulcerations of the mucous membrane, unless we are positive in the belief that they are non-syphilitic in character. I believe in all cases of ulceration about mucous membrane, unless we are positive of the non-syphilitic character, we ought to give the patient the benefit of anti-syphilitic treatment.

Dr. Turner Anderson: Extra-genital syphilitic infection is not at all uncommon, and during the Chicago Exposition (I think it must have been during that year that Dr. Vance saw nine cases) a number of young children were infected who visited Chicago, supposed to be due to crowding together in the cars, etc. I saw two or three young boys with extra-genital chancres on lips; one boy twelve years of age was brought to me by his father with a typical chancre of the mouth.

Dr. Cottell has brought up an interesting question, and I hoped he was going to say he had confirmed his diagnosis of the case before beginning treatment by confrontation. In a recent case I had the satisfaction of determining this point; a man had mucous patches in his mouth, and his intended wife had a sore upon her lip.

I think it would be quite a delicate question for us to handle in regard to giving advice where only one was a victim; I doubt, however, if people ought to be permitted to marry under these conditions. But where we have the satisfaction of confrontation, I take it we are justified.

B. A. ALLAN, M. D., *Secretary.*

AMPUTATION FROM THE STANDPOINT OF THE RAILWAY SURGEON.—W. H. Elliot (Railway Surgeon) does not favor amputation as long as the arterial supply to the part can be demonstrated to be fairly good. Even where the part is cold, he waits for time to decide whether or not the circulation is to be sufficient to keep the part alive. These important points are followed by the author's discussion of the various methods in vogue.—*The St. Louis Courier of Medicine.*

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UNIVERSITY OF LOUISVILLE, MEDICAL DEPARTMENT.

The annual commencement exercises of the Medical Department of the University of Louisville took place at Macauley's Theatre, March 28, 1901. The Doctorate Address on behalf of the faculty was delivered by Prof. W. O. Roberts, and the Valedictory Address was delivered by Dr. John F. Crawford, of Kentucky. Dr. Crawford's address will appear in our next issue.

Judge Pirtle said:

GENTLEMEN: The learned faculty having certified to your worthiness, and that you have complied with the laws of the University and passed the requisite course of study and of examination, in the name of the President and Trustees of the University of Louisville, and by the authority of the General Assembly of the Commonwealth of Kentucky, I confer upon each of you the degree of Doctor of Medicine, and deliver to you a diploma signed by the learned faculty of the Medical Department, and by the President and Secretary, and sealed with the seal of the University, which will entitle you to all the rights, privileges, and emoluments of the degree wheresoever you may go in the world.

I also deliver to you copies of the Code of Ethics of the Profession of Medicine, and commend it to your careful study. The Code of Ethics has been deemed so important to the young physician that the American Med-

ical Association has had an edition published and dedicated especially for presentation to the graduates of medical schools in 1901, copies of which I have the pleasure of handing to each of you. This Code is a system of rules of conduct by the physician in his relation to his patient, to his brethren of the profession, and to the State. It also embraces the duty of the patient to his physician, and the obligation of the State to the physician. The first section sets forth the physician's responsibility in words that can not be excelled in appropriateness, and which I will read to you :

"A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office, reflecting that the ease, the health, and the lives of those committed to their charge depend on their skill, attention, and fidelity. They should study also in their deportment so to unite tenderness with firmness and condescension with authority as to inspire the minds of their patients with gratitude, respect, and confidence."

The Code is throughout elevated in its tone. It contains a morality most admirable. It is also very delightful to observe from its teaching that the proper conception of the physician is that he is above all things a gentleman. A gentleman is ever considerate and thoughtful of the rights of others; conscious of his own dignity and jealous to maintain it without rudeness. Having the closest relation to his patients, he is admonished that he is under the obligation of honor to keep inviolate knowledge which comes to him under the seal of a friendship, arising often from necessity, no less jealously than if it came from affection.

The Code provides that as in consultations the good of the patient is the sole object in view, no regular practitioner of good standing should be excluded from fellowship, or his aid in consultation refused when requested by the patient, but this, you will observe, by no means permits you to consult with so-called physicians. There is a design permeating this Code to elevate the profession of medicine and to preserve its dignity. You are to regard yourselves as of so high rank that you are not to demean yourselves by association with men who, claiming to be doctors, are in fact charlatans. This is very clearly and emphatically expressed. Yet the claims of humanity are never to be disregarded. The first duty of the physician is to administer to the sick and suffering, and give relief. This is to be done always, and afterward you may refuse further to act with the irregular practitioner.

The American Medical Association has given an interpretation to the Code by a resolution forming part of the pamphlet which it has presented to you, which does honor to the profession, and places upon the highest plane the duty of the physician. I will read it to you :

"Resolved, That there is no provision in the National Code of Medical Ethics in any wise inconsistent with the broadest dictates of humanity, and

that the article of the Code which relates to consultations can not be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code."

This is the profession into which you have come, and beginning to day to which you are to devote your lives. Hitherto you have been acolytes, but you are now admitted into the order of priesthood, with its responsibilities, its honors, and its duties. I think a man who is fitted for it by nature does a wise thing when he studies a profession. By the years of study which you have given to medicine, and your success in attaining to the degree just conferred upon you, I feel sure that all of you have been intended by your gifts, by your talents, by your tastes, to be doctors. You have capitalized all these, and made them the means by which you will make your way in the world. If you will continue your good work your capital will increase each day. As the successful merchant and manufacturer by his labor adds constantly to his stock of goods or his plant, so you will by becoming more and more skillful, more and more learned, with increasing reputation add to your capital each day. We give you a start to-day well equipped for your life-work; you have trained intellects capable of acquiring all the knowledge and skill belonging to your profession. You have a fund of knowledge to which you must continually add without losing any that you now possess. Your minds may be likened to your case of surgical instruments, all bright and sharp and ready for use, and as those keen edges and brilliant sides will become dull and rusty from neglect or disuse, your minds will need constant care and exercise to preserve their strength and acuteness. The faculties, both physical and mental, demand training and work to reach their highest capabilities and to prevent retrogression.

Gentlemen, the Board of Trustees extends to you its congratulations upon the success that has attended your four years of study and has crowned your efforts with the honorable degree which has just been conferred upon you. We wish you prosperity, and that you may attain such distinction as your utmost hopes demand.

LIST OF GRADUATES, SESSION OF 1900-1901.

Anderson, Simrall, Kentucky.	Davenport, Edward, Kentucky.
Adams, Joseph Richard, Indiana.	Ford, Otwell Howard, Kentucky.
Adcock, John H., Kentucky.	Gray, Thomas Parker, Indiana.
Bizot, Alphons Richard, Ph. G., Kentucky.	Gilbert, George Beard, Kentucky.
Brennan, John A. Ouchterlony, Kentucky.	Granbery, Roy, B. S., Tennessee.
Barton, Claude, Pennsylvania.	Hoffman, George Henry, Ph. G., Colorado.
Crawford, John Franklin, A. B., Kentucky.	Hoffman, Claude Graham, Kentucky.
Cauble, William Commodore, A. B., Indiana.	Halsey, Bruce Frary, New York.
Close, Thomas Harland, Ph. G., Indiana.	Humphrey, Benjamin Franklin, Kentucky.
Doyle, Oscar Whiteside, A. B., Kentucky.	Jones, Wellington West, Massachusetts.

Kidd, Albert B., Ph. G., Washington.
Morris, Charles David, B. S., Kentucky.
Maine, Alva Frank, New York.
Nollau, Charles Lee, Kentucky.
Prather, Hugh Edward, Kentucky.
Stevens, William F., Kentucky.
Stevens, Vincent Curtis, Indiana.
Struthers, Oliver Currie, Arkansas.

Sommer, Benjamin Franklin, W. Virginia.
Staples, James Gwin, B. S., Kentucky.
Speed, Joshua Fry, Kentucky.
Travis, Daniel Jackson, Kentucky.
Wells, William E., Florida.
White, Hallie Hugh, Tennessee.
Yeager, John Moody, W. Virginia.

Prof. R. B. Gilbert, Dean of the Hospital, made the following report :

Mr. President and the Board of Trustees of the University of Louisville, It is with much pleasure that I have to report to your honorable body that since our last annual Commencement the Medical Department of the University has, after much labor and expense, added to its teaching facilities a thoroughly equipped and well-arranged hospital with a capacity of about eighty beds.

In pursuance of a resolution adopted by the Board of Trustees at a called meeting held on the 5th day of June last, in which the faculty of the Medical Department were authorized to proceed to establish a hospital, to be known as the University Hospital, in the building on the University square which was at that time partly occupied by the Law School, and which was formerly used by the city as the Boys' High School, provided amicable arrangements could be made with the Law School faculty for obtaining possession of the building, a suitable building was soon erected for the Law School on the University grounds, which they immediately occupied.

The faculty of the Medical Department provided the means among themselves, and at once engaged an architect to remodel the building for hospital purposes. The large school-rooms on the main floor have been converted into a number of small private rooms. The old chapel room on the third floor has been converted into two separate wards, each containing sixteen beds for male and female white patients. The two large class rooms on the basement floor have been converted into wards having ten beds each for male and female colored patients. The large room on the second floor in the southeast corner of the building is converted into an operating-room and clinical amphitheater, which has seating capacity for 150 students.

A well-appointed kitchen and dining-room are arranged in the basement. Bath-rooms and lavatories, with hot and cold water, are situated on each floor.

The hospital is lighted throughout with electricity and heated by coal fires and natural gas.

The grounds surrounding the building have been beautified by cutting out and trimming up the trees and sowing bluegrass.

A competent corps of uniformed trained nurses have charge of the nursing work in the hospital, and they are on duty at all hours of the day and night.

A training school for nurses is also a feature of our hospital. A systematic course of lectures is being delivered to the nurses by the members of the Medical Faculty of the University.

The first patient was admitted to the hospital on the second day of December last, and the formal opening and public reception was held on the evening of the 21st day of February last.

The University Hospital has up to this date, March 28, 1901, received seventy-one patients. There remain in the hospital still under treatment twenty-four patients.

That you and the Honorable Board of Trustees may have some idea of the work already accomplished in our hospital, I submit herewith a classified list of the cases received and treated up to date.

The surgical cases are as follows:

OPERATIONS FOR		OPERATIONS FOR	
Double ovariectomy, - - -	12 cases	Curetment - - - - -	2 cases
Complete hysterectomy - - -	2 "	Fractured leg, - - - - -	1 "
Appendicitis, - - - - -	3 "	Tumors of neck, - - - - -	2 "
Perineorrhaphy, - - - - -	2 "	Cataract of eye, - - - - -	1 "
Amputation of arm, - - - - -	1 "	Varicocele, - - - - -	3 "
Trephine, - - - - -	1 "	Ovarian cyst, - - - - -	1 "
Stone in bladder, - - - - -	1 "	Gunshot wound, - - - - -	1 "
Cancer of eye, - - - - -	1 "	Hernia, - - - - -	1 "
Enucleation of eye, - - - - -	1 "	Straightening nose, - - - - -	1 "
Ectropion, - - - - -	1 "	Eczema of leg, - - - - -	1 "
Fatty tumors - - - - -	2 "	Hemorrhoidal tumors, - - - - -	1 "
Necrosis of bone, - - - - -	2 "	Stricture of esophagus, - - - - -	2 "
Fistula, - - - - -	3 "	Cancer of uterus, - - - - -	1 "
Cancer of breast - - - - -	2 "	Stricture of bowel, - - - - -	1 "
Hypertrophy of prostate, - - -	1 "	Obstetrics, - - - - -	2 "

The medical cases are as follows:

Neurasthenia, - - - - -	2 cases	La Grippe, - - - - -	3 cases
Inflammation of stomach, - - -	2 "	Salpingitis, - - - - -	1 "
Typhoid fever, - - - - -	1 "	Conjunctivitis, - - - - -	1 "
Heart disease, - - - - -	2 "	Inflammatory rheumatism, - - -	1 "
Pneumonia, - - - - -	2 "		

A total of 71 patients.

This large number of patients received and treated at our hospital in so short a time has far exceeded the expectations of the faculty, and

this fact has already given us assurance of the ultimate success of the enterprise.

The increased facilities for bringing before our students so great a number of clinical cases has been highly gratifying to the faculty, and is duly appreciated by our medical students.

In conclusion, may we remind your honorable body that the charity work of the hospital, while a pleasure and satisfaction to us, is at the same time quite a burden upon the faculty? And may we express the hope that the means for enlarging the work of our charity department may be encouraged and helped in a substantial way by endowment of beds and by direct donations from a generous public?

Respectfully submitted.

R. B. GILBERT, M. D.,
Dean of the Hospital.

Current Surgical and Medical Selections.

TREATMENT OF HERNIA IN CHILDREN.—Ochsner (Jour. A. M. A.), from a thorough study of this subject, arrives at these conclusions:

1. The development of herniæ in children is favored by: *a*, faulty development of the abdominal wall; *b*, insufficient strength in the tissues involved in closing the umbilical, inguinal or femoral openings; *c*, abnormal intra-abdominal pressure; *d*, unclosed condition of the tunica vaginalis.
2. The causes *a* and *b* are likely to be inherited.
3. The abnormal intra-abdominal pressure is due: *a*, to gaseous distension resulting from improper feeding; *b*, to the exertion necessary to accomplish defecation in case of chronic constipation; *c*, to the same exertion necessary to evacuate the bladder on account of obstruction due to phimosis; *d*, to severe, long-continued coughs.
4. A large majority of all cases of hernia in children will heal spontaneously if the increased intra-abdominal pressure is relieved, the hernial sac being kept empty.
5. This can be accomplished by means of trusses or, much more rapidly, in inguinal and femoral hernia, by placing the child in bed with the foot of the bed elevated, the time usually required not exceeding six weeks.
6. Children with a tendency to the formation of hernia should be guarded against developing coughs.
7. Their diet should be given at regular times and chosen with a view to avoid gaseous distension.
8. Constipation should be entirely prevented.
9. In case of boys, phimosis should be relieved if present.

10. Badly nourished and badly cared-for children of the poor should be treated in hospitals, being placed in bed in the inverted position, the cause of increased intra-abdominal pressure being removed at the same time by proper treatment.

11. Operation is indicated *a*, in strangulated hernia; *b*, in irreducible hernia due to adhesions; *c*, in case the opening is unusually large in a free hernia, especially if the condition is hereditary and the hernia can not be retained by means of a truss; *d*, in reducible hydrocele.

12. Except in class *c*, the operation should consist simply in carefully dissecting out the sac, ligating it within the abdominal cavity, cutting away the sac and permitting the stump to retract within the abdominal cavity, and simply closing the wound in the skin.

13. The recumbent position, with the foot of the bed elevated, is of very great importance in the operative as well as in the non-operative treatment of herniæ in children.

14. If the child can not be kept in this position sufficiently long, a well-fitting truss should be worn night and day until there has been no protrusion for at least six months, at the same time the necessary precautions being constantly taken to guard against intra-abdominal pressure from any cause.—*Memphis Medical Monthly*.

THE PATHOGENESIS OF JAUNDICE.—Browicz (*Wiener klin. Wochenschrift*, 1900, No. 35) has brought together the results of investigations on the causation of jaundice, which, if confirmed, will add clearness to our knowledge of that process. His conclusions are: 1. The origin of jaundice rests on the increased function of normal liver cells, which, irritated by various causes, can take up and elaborate excessive quantities of nutrient and functioning material, eventually hemoglobin, converting these into bile or bile-coloring matter. 2. Only a normal, healthy liver cell that can take up an excess of material and convert it into bile can empty the extra bile into the intercellular biliary canals. From there, partly through cells of the blood-capillaries, the bile reaches the blood. 3. Mechanical factors have only a moderate effect on the origin of jaundice by setting up disturbances of the circulation within the blood-capillaries. 4. The blood capillaries of the acini furnish the usual route to the general circulation, the lymphatic vessels in the vicinity of the larger biliary canals being concerned only to a slight degree. 5. All forms of jaundice can be explained by the method stated—*i. e.*, the increased function of the liver cells.—*The Amer. Jour. of the Med. Sciences*.

ON ENURESIS AND IRRITABLE BLADDER IN CHILDREN.—Bierhoff (Pediatrics) believes that enuresis is but an advanced state of "irritable bladder." By enuresis is meant that condition in which the urine is discharged from the bladder without the knowledge or consciousness of the patient. By "irritable bladder" we mean that condition in which there is an abnormally frequent or increased desire to urinate.

In the past, on account of the impossibility of thoroughly examining the little patients, no exact data as to the cause have been collected. The author quotes various writers as to the cause of this, and concludes that a great difference of opinion exists. Personally, he believes it is the result of a combination of conditions, the exciting cause being an abnormal increased reflex irritability of the mucous membrane, most marked at the sphincter, and at times, in addition, of the trigonum vesicæ, or sometimes, in the male, of the prostatic urethra, and that the cause of the heightened reflex irritability is to be sought either in hyperemia or an inflammation of the vesical neck, the sphincter or deep urethra, existing either singly or in combination.

The treatment which the author especially recommends is hot sitz-baths once or twice daily, the appropriate treatment of accessory causes, the restriction of fluids in the evening. At night the child is laid so that the head is lower than the hips. In older children local treatment through the endoscopic tube is recommended.—*The St. Louis Courier of Medicine.*

THE THERAPEUTICS OF MENSTRUAL DISORDERS.—By Dr. H. Macnaughton Jones (Merck's Arch.). After calling attention to the confusion due to the facile use of the terms "functional" and "organic," the author alludes to the universal habit of accepting symptoms at their face value instead of investigating underlying causes. These may be general or local. Disturbances at the time of the menopause are frequently regarded as functional when pathological changes are really present. The advent of puberty may be the time at which ovarian cystomata or errors of development of the genitalia may give rise to menstrual disorders.

After alluding to hydrotherapy, Weir-Mitchell plan, and diet, the author takes up the medicinal treatment of menstrual disorders. He gives senecin in amenorrhea and dysmenorrhea. Hydrastis, piscidia erythrina, hydrastis, and bromides are given alone or in combination in dysmenorrhea. Ergotin, stypticin, and cornutin hydrochlorate he uses in menorrhagia or metrorrhagia. Besides manganese and iron, many other drugs are employed in amenorrhea. For distinct ovarian pain and the pains of dysmenorrhea the author also advises camphor monobromate, antipyrin, codein, exalgin, butyl-choral hydrate, and local sedatives. Thus over the neuralgic ovary he finds useful a pigment containing belladonna, camphor, mastic, chloroform, and tincture of aconite. In congestive ovaritis he uses a counter-irritant containing iodine, mastic, rectified spirit.

Operative treatment consists of the "rectification of displacements, the removal of morbid growths, the curettage of the diseased endometrium, and, in extreme cases, the excision of the adnexa."—*The Post-Graduate.*

Special Notices.

"COCA" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of the commercial drug makes it uncertain, however. Robinson's Wine Coca (see advertising pages) we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of Cocaine being always determined by careful assay. Write Robinson-Pettet Co. for interesting pamphlet.

URIC ACID AND HEADACHES.—A physician who has been experimenting to discover, if possible, a relation between headaches and the retention of uric acid, found experimentally that he could produce a headache in himself by adopting a diet of meat and cheese—foods which are highly nitrogenous, and which in their burning up produce a great deal of uric acid. He found in himself an excessive excretion of uric acid during a headache, which perhaps means that a headache is a sign of nature's effort to relieve the system of a poison that would do worse than produce headaches were it permitted to remain. Such a headachy condition is comparable to the fevers which the human system often establishes for the purpose of ridding itself of disturbing impurities, and can best be overcome by the timely administration of Laxative Antikamnia and Quinine Tablets.

ANEMIA IN DYSPEPTIC PATIENTS.—Dr. J. Weiss, of Vienna (*Die Heilkunde*, December, 1899), reports his results with various iron preparations in cases of anemia attended with gastric disorders, such as pains in the stomach after ingestion of food and a feeling of fulness in the epigastrium. He has derived excellent results from the use of ferro-somatose in doses of three teaspoonfuls daily. In one of the cases of anemia reported, due to lead poisoning, the quantity of hemoglobin increased within a month from thirty to seventy per cent, while the increase in weight amounted to eight pounds. In another instance of chlorosis the increase of hemoglobin was thirty per cent in six weeks, and in another case forty per cent during five weeks. A patient who suffered from severe anemia and emaciation during the puerperal state was completely restored to health in six weeks. In all these instances ferro-somatose was well tolerated without producing the least gastric disturbances, and in this respect the author's observations are confirmatory of those of Roos, Werner, Parker, Klein, and others.

A CASE OF SINUS.—I used Echthol on a case of sinus extending from the inner and middle of the right thigh upward and outward nine and one-quarter inches in length. It had been operated upon in that locality twice, also once on the canal from the psoas abscess, its starting point. The sinus was lined with a tough pyogenic membrane, so that by inserting the index finger its full length occasioned no pain. The young man, twenty-two years old, would submit to no further operation. I inserted perforated rubber tube, one-half inch in diameter, nine inches, burned or destroyed the membrane with chloride of zinc solution, after which I used Echthol; filled the cavity completely full three times a day, by which the pus ceased to flow from the very beginning. I continued its use until I could not insert even a catheter. I applied a rubber bandage for five weeks, dismissed him then as cured; the period extended eight months. I used five bottles of Echthol. I dismissed the case in May last, and will wait to see further results, then I will try to write an article on that case and on two others on whom I used the medicine. My faith in Echthol is unlimited, and can only say the case above described, from a city of twenty-eight physicians, has increased my practice in that locality.—*G. W. Bodey, M. D., in Medical Brief.*

KETTLERSVILLE, OHIO, September 17, 1899.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—*RUSKIN.*

Original Articles.

TRUE GREATNESS.*

BY J. FRANK CRAWFORD, A. B., M. D.

Did you ever hear the roll-call of ancient civilization? If not, lend me your ears: Rome, answer! Not a sound was heard to break the deadly silence. Athens, stand up! A faint sound came from the rear—dead, dead. And so it is with the nations which once held the throne of intellectual supremacy.

History reflects the great panorama of their existence against the dark background of the vices of the Orient. It pictures to us the dogmas and creeds which lurked behind their Goddess of Liberty, drinking the red fluid from the poisoned cup of priestly degeneracy. It shows us how crime and oppression followed in the wake of the illiteracy and superstition which laid in waste the ruins which are now crumbling beneath the lapse of ages. But as the moving hand upon the great dial-plate of time approaches the twelfth hour it marks a period in its evolution which is resplendent and glorious in the light of brilliant achievements, and as the clock sounds the death-knell of the nations of the past it marks the coming of the dawn when the nations now in supremacy have reached the climax of their glory. It marks a time when the castled prejudices of the ages are mown down with the blade of a Damascus like the walls of Jericho before the bugle-blasts of Joshua; a time when ignorance and folly retreat before the approach of advancing civilization; a time when the world is no longer a babe bouncing upon the nurse's knee, but like magic has sprung into the

* The Class Valedictory of the Medical Department of the University of Louisville.

mighty physique of a Hercules. It marks a period when the once tangled web of metaphysics is now the school-boy's hobby. A period when the dark avenues of mysterious phenomena have been permeated and the searchlight turned upon the hidden forces in nature's arcanum. It marks an epoch in the development of the race, when the human mind has dropped its swaddling-clothes, emerged from the nursery, and in its maturity stands in the arena contending for the problems of the hour, and thus it would appear that the zenith of greatness has been attained.

We have gone into the astronomer's observatories, and with his powerful telescope we have taken the distant planets in our hands, and have fondled them as a child with its toys. With his graded lenses we have made desert places break out into oases of stars, and we have thought that this was great. With the aid of the microscope we have had an insight into the minute structures of our bodies, unearthing the hidden worlds of living organisms to study and investigation, and truly "we are fearfully and wonderfully made." We have heard the psychologist explain the wondrous mysteries and workings of the human soul and mind. We have heard the geologist read the history of races, long ago extinct, by the silent language of fossils, and we have thought that these were great. We have listened to the muses sing of the star-spangled canopy that spreads over us on the moonlit night like a halo of gold beset with jewels.

We have seen the beautiful spring morning with its silvery dew-drops sparkling like diamonds beneath the golden rays of the morning bronze. We have viewed landscapes, grand beyond description and beautiful to behold, and we have thought that surely these were great, for we stand face to face with the Infinite when we behold the beauty, grandeur and sublimeness of Nature. We have watched the greyhounds of the sea plowing through the ocean billows, fearless of its fathomless depths below. We have seen the modern locomotive, a product of mechanical skill and ingenuity, thunder around the mountain crags, leap from peak to peak, dash into tunneled earth, and then stretch out across the rocky caverns below, deep and dark, and we have trembled with fear and horror at this monster, strong and great.

We have been entranced like the sirens with the melodious strains of the Æolian harps until our souls were ready to cry out in ecstasy from music that thrills our beings with inspirations of divinity, and we have thought that this was great. We have seen great physicians, in

battle array against the white-winged angel of death, rescue (as it were) precious souls from their heavenwardly flight and restore them to sorrowing friends and bereaved loved ones, and we have thought that surely this was great. But the query comes back to us in ever-increasing tones, have you found true greatness in these?

Study for yourselves the beauties of nature. Investigate the possibilities of art. Permeate the broad avenues of science and dig deep into its hidden treasures, but at last you turn back with the dismantled robe of vain hopes dragging in the mire of disappointment—no true greatness here.

If I would tell you the abode of this precious and much-coveted virtue, without assuming the dignity of a divine, I would point you to that celestial city whose portals, which we call death, are hinged upon the church of the living God; from whose altars, for twenty centuries, divine blessings, like flowers and sunshine, have been scattered along the pathway of men. That church which was founded upon the life of the humble Nazarine; that has built every almshouse, hospital, and college of learning; that has made monarchs just and people free; that has provided a retreat for every care-worn and sin-sick soul, and that at last affords the only solution for the problem of life and the mystery of death.

Shall ignorance and sin turn against her the weapons of her own creation? For she has ever been the nursery of knowledge; science grew up at her altars, singing her songs, lisping her prayers, and receiving her blessings and benedictions. Shall these now batter down her temples, whose spires point not more surely to the stars than do their teachings to heaven and immortality? Shall these now scatter her sacred vestments and desecrate her holy emblems? No. The church is not afraid of the light she has shed, the truth she has revealed, and the knowledge she has cherished and inspired, for, like a tender, loving mother, she warmed the infant into life at her bosom and gave it her fostering care, and now that it has leaped into the arena of this age with the limbs of an athlete and the sinews of a giant, she has nothing to fear at its hands, though it plays with the lightning and unlocks the mysteries of heaven and earth.

Science may smooth out some of the wrinkles from that mother's cheek, that have come down from the ages, only to make her more lovely and beautiful. It may tear away the human letters from that divine Book, which men can not read or see aright, only to reveal that

divine allegory and lesson of love to the hearts of men. It may strike off the rough corners and sharp angles about which men have always differed, only to display the harmony of proportion that proclaims the divinity of its inspirations. And when this shall have been done, we shall realize the song of that immortal poet who sang of the "land of milk and honey." True greatness shall be written upon our banners and unfurled to the nations of the earth. And the triumphant chorus will echo from every hill-top :

"Swing outward—oh! gates of the future,
Swing inward—ye doors of the past ;
A giant has wakened from slumber,
And is rending his fetters at last.

"From the dust where the proud tyrants found him,
From the cells where ignorance laid ;
He has risen, with the sunlight around him,
To rule in the realm he has made."

Kind and beloved Professors, I reckon it one of my life-honors that it is my privilege to speak for the class to-day their last and farewell greetings. Four long (yet short) years ago we looked into your faces with the reservedness of strangers. We enlisted under you as our preceptors, scrutinizing your every action, realizing that you were the ones to whom we had intrusted the responsibility of shaping our future destiny ; that you were the sculptors we had chosen to wield the mallet and chisel upon our unshapely forms. That formal coolness with which we met and mingled soon began to assume the nature of friendship, and as time has rolled on that friendship, like the little rose-bud, has grown and blossomed into love and admiration, and now that we are about to extend to you the parting hand we can not but say that we are sad, for our minds are prone to wander back and live over again, in thought, the many pleasantries of our past association, and thus the sweetness of memory intermingles with the sadness of parting. In recalling your many acts of kindness we realize that too quickly has time brought us to the parting moment. To our sorrow and regret we realize that the mile-posts along our journey are rapidly slipping by, and that time is a piece out of eternity.

Another page in our history has been written, and another college year, with all its opportunities and blessings, has been taken from our hands and placed on record in the books of the judgment. The unseen world comes near, and for a time blots out the scene. The veil falls

from before our eyes, and we pilgrims and strangers find ourselves in the presence of the Eternal. Life assumes its just proportions, and the exaggerations of this brief existence are reduced. Harassing cares and vain ambitions of to-day are shamed into silence. Vain regrets and haunting sorrows are laid to rest. We look out upon the greater life with its untold possibilities and fearful responsibilities, and this life is cast into insignificance.

We hear the sound of the ages and the voices of this world grow faint, and thus we are forcibly impressed with the fleetness of time, but yet, in this hour, when the heart is so tender and the conscience so susceptible to the kindly feeling and gracious service with which you have considered us, and when we look down the long road not yet traveled, whose circumstances are hidden from view, we can not help but long to remain under your care and to rest our burdens upon your shoulders, broad, tried, and true. For just as we are standing upon the threshold of a new century you have given us birth into the oldest and most sacred of sciences. You have stood ajar the portals to the temple of knowledge, and have bade us come in.

You have led us up to the fountain's spring and taught us to drink deep of its sylvan waters. You have pronounced your benedictions upon us, and have bade us go into new fields of duty and responsibility, and, in saying good-by, may we invoke upon you the blessings of Him who holdeth our future destiny. May the crowning days of your lives be numerous and joyful. May flowers of ease and blessings of comfort be strewn along your pathway, and when the evening of your lives draws to a close and the sun sinks behind the western horizon, and your souls take their flight to assume the immortal, may it be like the setting of a mid-summer's sun which casts a long and glorious twilight. For the true greatness you have attained as a star in your crowns will far outshine your wealth of knowledge, years, and honor, and will win for you, as a reward for having thus lived, the just verdict: "Well done, thou good and faithful servant." Good-by.

Dear classmates, for the allotted time we have toiled and labored in the vineyards of our dearly beloved. The seeds have been sown, and the plants are now ready to yield. The spring has passed, and the summer is on. With the passing of the day our school life comes to a close. Our association as classmates has an end. The young leaf has fallen in the brooklet, and, in its swift current, has drifted down to the great ocean of life. The curtains have been drawn aside, and our eyes

fall upon the scenes of our future. To-day we set sails for a distant seaport. With the cargo on board and our hands upon the helm we steer toward the open sea to breast its troubled waters. "We begin practice the heir of all the ages. The wisdom of the past lays its treasures at our feet."

The skill and knowledge of men whose names now compose the galaxy of fame have been handed down to posterity, and the rich treasure of their labor is our inheritance. But in estimating the greatness of our legacies, we hear the phantom voices echoing in our ears: "Young man, your heritage is great and the reward is riches. The battles have been fought and the spoils are yours." And thus the world would flatter us that the harvest has been reaped and the work is done, and would say to our souls: "Take thine ease." But may we not cater to these "tinkling cymbals," for, though we are in the grace of the twentieth century, yet the trail of the serpent is over us. The superstitions and follies of medieval times have their followers and supporters in our midst, who contest every step toward advancement and oppose every effort toward civilization. So may this stimulate us to earnest endeavor, that we may reflect with merit the splendor which shines upon us from the fathers of our art. We are to realize the prophesy of our gallant chieftain: "That over the path we are to tread sunshine and shadows will chase each other. Its dust will be pitted with the tears of many sorrows. In this heyday of hope we catch from afar the gleam of silken banners waving from victor standards, and hear the thrill of trumpets calling us to the field of conquest. Ere long in dusty uniform, amid the fierceness of the conflict, with the cries of pain in our ears, we will find ourselves pressed by foes while supported by friends, and if we do not falter but faithfully pursue to the end, our dying pillows will be cheered by many grateful memories," and the shortening path will be smoothed by the sweet conscience of duty done to man and God.

Our greatest sorrow in parting to-day is that we haven't many more days to sit in our old seats and listen to voices that we have learned to love. Those days have past and gone.

"Bright college years with pleasure rife,
The shortest, gladdest years of life;
How swiftly they have glided by,
Oh, why doth time so quickly fly?"

No more can we sit beneath the shadows of those venerable walls of learning which we represent, whose records are replete with honorable deeds and magnificent achievements, resplendent and glorious in the light of Christian teachings and hallowed by the memory of founders, numbered among the sainted dead, whose deeds live after them and whose lives may be read as inspired poems. No more can we mix and mingle as a united class. The ties that bind us near and dear are soon to break. No more can we gather in each other's rooms, boys, and revel our souls in the sweet melody of songs.

Soon the rushing trains will speed us to our places in the line of duty, and though we break hands to-day for possibly the last time on earth, yet the memory of your faces and virtues will grow stronger with the passing of time, and when the end of our journey is in sight, when silvery hairs mark the frosts of many winters, and when our bodies are perhaps stooped and feeble with the infirmities of age, then it will be sweet, though sad, to look back and live over again, in thought, the many joys of our college days, and our last hope will be to wander back to that dear spot where our happiest moments were spent. For as long as life remains, so long shall our beloved Alma Mater be vivid in the caskets of our memory.

But enough of words. We must part. You have acquitted yourselves with credit in college, boys; God's speed be with you in life. Go! The painful cries of suffering humanity are calling loudly, and I must speak the word which will be and hath been a word which makes us stop and falter; yet, Farewell!

MARION, KY.

FOUR STAB WOUNDS OF THE ABDOMEN.*

BY H. HORACE GRANT, A. M., M. D.

Professor of Surgery, etc., in the Hospital College of Medicine, Louisville, Ky.

The treatment of stab wounds in the abdomen has at times in the past fifteen years been more or less a question of difference of opinion, and even now there is no fixed data upon which the profession rests; and while it is true that in the majority of cases of stab wounds of the abdomen the experienced surgeon will know at the operating-table the best means of treatment to employ, it is fully appreciated that it is a

* Read before the Louisville Medico-Chirurgical Society, March 15, 1901. For discussion see page 306.

difficult problem on which to lay down any positive rules. In the perforating and penetrating wounds of the abdomen due to gunshot, an almost unanimous voice of the profession has settled the method of procedure. Here the condition, however, is different; a missile which it is even difficult to follow through the abdominal wall with a probe, and which is liable to pursue a direction in that cavity practically indeterminable from the external wound—unless perforation has resulted, with the escape of the bullet from the opposite side—inflicts a wound, though of very small caliber, yet abundantly able to produce a prompt and mortal hemorrhage, or cause hopeless damage to the hollow viscera. In stab wounds it is far easier to demonstrate that the cavity has been penetrated, and usually the finger can readily be introduced through the wound, yet the percentage of injury to the viscera is greatly less than in the gunshot wound.

As a matter of fact, in most localities it is not difficult to determine the instrument with which the stab wound has been inflicted. This is practically always the case in private practice. In hospital practice in large cities it may not be possible always to get a history as to what instrument inflicted the stab. This information is very important, inasmuch as a wound inflicted by a short penknife will naturally produce very much less damage than one occasioned by a stiletto or other long knife. In the face of such history, together with the appearance of the wound, it may be sometimes possible for the surgeon to decide in the presence of a penetrating stab wound of the abdomen that a laparotomy is not necessary; but in view of the fact that under good surroundings an exploratory operation which involves the enlarging of the stab wound adds little, if any, to the gravity of the condition, and in experienced and skilled hands offers information of the highest value, it may be pretty well settled that such exploration should be made. Nothing can possibly be lost by it, and a great deal may be gained.

There has been growing prejudice among abdominal surgeons in the last few years with regard to irrigation of wounds in the abdomen in which no positive evidence of sepsis is obtained, on the ground that if any infection does exist it might be disseminated through the cavity. While it is easy to understand that if no septic infection exists irrigation is useless, it is difficult to see why septic material should not be washed out of the abdomen if it is present; nor is it easy to make clear to me how a septic material which is sufficiently virulent, though

diluted many times by the irrigation fluid, to produce grave infection, may be left with impunity in one spot within the cavity. There is no discreet surgeon who, if he could see a spot of septic matter in the bottom of the pelvis, would hesitate to get it out by the irrigation fluid if he could not wipe it away, or who would indeed stop short of accomplishing this end by one step or another. Why, then, when he suspects it only, he should hesitate to employ the same steps upon the ground that if sepsis were present he might do harm, is to me unsatisfactory logic. It has been my custom to explore all stab wounds of the abdomen at least sufficiently far to determine whether there was free blood in the cavity, and whether hemorrhage was going on; and also to investigate the condition of the viscera adjacent to the injury. It has also been my custom, under all circumstances, where I had reason to believe there was a possible infection, to employ irrigation with a warm saline solution, and though I think I have seen patients die from nearly every thing else, I have never been able to trace a fatality to this step. Drainage of such wounds should never be omitted; preferably, I think, it is made by the gauze wick wrapped with rubber tissue. This drain should be removed not later than thirty-six hours, if there are no evidences of infection by this time, and the provisional suture entered at the time of the operation may then be tied.

I report four recent cases which present four different conditions: One a perforation not exactly overlooked, but resulting from secondary ulceration; one with an absence of both hemorrhage and perforation, with a protrusion of eight feet of the intestine into the clothing; one with tremendous hemorrhage and great damage to the viscera, and one of serious hemorrhage from the abdominal wall.

CASE 1. S. C., white male, age forty. Seen with Dr. Pelle. Patient was a vigorous man, who, an hour before I saw him, had received a stab wound with a butcherknife on the left side, midway between Poupart ligament in the umbilicus. Six feet of this man's small intestine protruded through the opening, which was three inches in length. There was no external hemorrhage. Under an anesthetic the intestine was thoroughly cleaned and four perforations sewed up, one of which involved nearly the entire circumference of the intestine. No other wounds were found; the abdomen was carefully cleansed and washed out, drainage-tube put in, and the wound closed around it. The patient's bowels moved on the third day, and his pulse and temper-

ature remained about normal until the fifth day, when he developed vomiting and symptoms of general peritonitis. He died on the seventh day, and a post-mortem examination showed there had been a superficial wound of the peritoneal and muscular coat of the small intestine, without complete division of the wall of the bowel. Necrosis had taken place in this wound, and a perforation about the size of a slate pencil had occurred. It is likely that a more careful tracing of the intestine at the time of the operation would have discovered this lesion.

CASE 2. Mrs. S., white female, age forty-two. Seen with Dr. Helms two hours after injury. Dr. Helms, on his arrival, reduced a protrusion of the intestine about three feet in length, in which no wound could be discovered. Two wounds of the abdominal wall were presented, through the largest of which—about an inch and a half in length—the protrusion had occurred. There had been but moderate external hemorrhage, but the pulse, when I saw the patient, was 130, yet fairly strong. Under anesthesia, after the abdomen had been carefully cleaned, the largest wound, which was to the left of the umbilicus, was extended, and upon exploration evidences of a very profuse internal hemorrhage, which was still going on, were encountered. This hemorrhage was so considerable that it was feared the patient would die on the table before we could control it, but by grasping the root of the mesentery with my left hand and drawing it downward to the opening in the abdomen, I was able to see the bleeding points and control most of them by pressure, while I quilted the wounded surfaces together with a needle and catgut. There was no time for ligatures, even if the vessels could have been seen, which was not the case, and the bleeding surfaces were hurriedly compressed by this quilting process. After the hemorrhage was controlled it was found that the ileum at one point had been completely divided, the knife even severing the mesentery for the depth of over an inch. Four other wounds of the intestine of greater or less extent were found and sewed up. The abdomen was flushed out carefully with hot saline solution, a portion of which had been previously introduced by intravenous injection. A glass drainage-tube as well as a gauze wick were introduced. The other small wound was simply cleaned and sewed up. Vomiting and indications of intestinal paresis set up upon the second day, but after a somewhat stormy history the patient made a perfect recovery. The suppuration, even about the wound, was very slight.

CASE 3. S. H., colored male, age thirty-five. Seen at the City Hos-

pital. This man had a stab wound entering between the eighth and ninth ribs, passing through the pleura and diaphragm, and entering the cavity. A laparotomy wound was made below the ribs, but no injury to the viscera was discovered, though considerable internal hemorrhage appeared to have taken place. This was evidently continuing, but extensive search failed to reveal its source until, just as we were about to despair, it was found to come from the intercostal artery. This was at once secured and the laparotomy wound closed up. But for this incision into the abdomen the internal bleeding would not have been discovered, and a fatal issue would have been inevitable.

CASE 4. J. S., colored male, age twenty-four. Seen at the City Hospital. This man was also stabbed in the left side above the umbilicus, directly over the region of the spleen. When he arrived at the hospital six or eight feet of his intestines were protruding into his clothing. No wound appeared upon this protrusion, which was carefully cleaned and restored by the house surgeon. In order to get the intestine back the wound was enlarged a little bit. When I saw him, some two hours later, under an anesthetic I introduced my fingers into the thoroughly cleansed wound, finding there was no evidence of continuance of hemorrhage, and there had been but little. I opened up the wound so as to examine the spleen and the immediate adjacent intestine, washed out the abdominal cavity with a saline solution, put in a gauze wick drain, and closed up the wound around it. This man recovered perfectly without an elevation of temperature or any sign of suppuration, although the drain was left in without my knowledge for forty-eight hours.

These cases present four different phases of stab wounds, and although the last one would have probably recovered without any further operative steps than the cleansing of the intestine which protruded and returning it, yet the propriety of the exploratory steps is unquestioned in the other three. It is a curious fact that all of these stab wounds were inflicted upon the left side. We conclude, then, that it is wise surgery in all stab wounds, except the most trifling, in which a penetration is demonstrated, to convert the wound into laparotomy and explore for hemorrhage and wounds of the viscera, and afterward irrigate the wound and drain.

LOUISVILLE.

CYSTITIS.*

BY JOHN R. WATHEN, A. B., M. D.

Professor of Pathology and Clinical Professor of Gynecology in Kentucky School of Medicine; Visiting Surgeon to Louisville City Hospital and Kentucky School of Medicine Hospital; Member Kentucky State Medical Society, Louisville Society of Medicine, and Louisville Clinical Society, etc.

Inflammation of the bladder has of late been studied along more scientific lines than formerly, and we are fast coming to a better understanding of the diagnosis and treatment of the various lesions which may be present. This advancement has been made largely through careful and accurate bacteriological investigations and improved instruments for diagnosis and treatment.

Cystitis, according to most of the modern authorities, is a true inflammation of the bladder; that is, due to germ infection, and the idiopathic cystitis of the older writers is now obsolete. The acute congestion and irritation due to retention are always transitory unless infection is added to cause a true inflammation, although the acute symptoms may be similar. We might add to these another class of cases in which the hyperacidity and neuroses cause irritation, but are not to be classed among true inflammations of the bladder. The disease, according to its clinical course, is acute or chronic. I will omit any elaborate classification of the pathological aspects of cystitis.

As regards the causes, we are placing less stress upon predisposing and more upon the exciting or real, which are the different varieties of bacteria found in each case, whether acute or chronic. With the possible exception of the gonococcus and tubercle bacillus, it is generally accepted that the ordinary pyogenic bacteria are incapable of infecting a normal bladder, and only gain entrance through some abrasion of the mucous membrane. This has been amply proven by the fact that unclean catheters and sounds have been used without producing a cystitis.

Ammoniacal urine, whose decomposition is due to bacteria, was formerly considered the cause of bladder inflammation, but statistics have shown that 73 per cent of acute cases of cystitis have acid urine. The germs most concerned in the production of cystitis are the urea-decomposing bacteria, colon bacillus, gonococcus, tubercle bacillus, typhoid bacillus, staphylococcus albus and aureus, bacillus proteus vulgaris, and many others. Statistics as to the frequency of each

* Read before the Louisville Society of Medicine, April 1, 1901.

particular germ which might be the true etiological factor are fast increasing, and Brown, of Johns Hopkins, has recorded the following percentages for acute and chronic cystitis:

For acute, the bacteria found were: Colon bacillus, 57 per cent; staphylococcus albus, 19 per cent; staphylococcus aureus, 8 per cent; bacillus pyocyaneus, typhoid, and proteus vulgaris, each about 4 per cent. In all these cases the urine was acid in reaction except the one with bacillus proteus vulgaris, which was ammoniacal. The acidity is increased in cases of the typhoid and colon bacillus and diminished in cases of the staphylococcus aureus. In chronic cases the bacteria found were: Colon bacillus, 55 per cent; staphylococcus aureus, 10 per cent; albus, 7 per cent; a urea-decomposing white staphylococcus not classified, 13 per cent; and bacillus proteus vulgaris, 4 per cent.

The urine was acid in twenty-six of these cases of chronic cystitis and alkaline in five. Young, of the same institution, claims to have found many more varieties of bacteria than Brown, and includes the streptococci, bacillus lactis, gonococcus, etc. He claims that the colon bacillus was not found so often in his cases, and that the staphylococcus albus is a much more common cause in the male than female. Also Young claims that the colon bacillus always causes a strong acid reaction and the proteus ammoniacal. If both are present, a neutral reaction or slightly alkaline occurs.

These microbes may gain entrance to the bladder through the kidneys, blood, and lymph channels, or pass from rectum, as well as by catheterization or extension of inflammation from the urethra.

Albarran has lately called attention to the anaerobic bacteria as causative agents, as well as the aerobic, especially in those cases which are grave, with a tendency to gangrene.

Our conception of the pathology and diagnosis of cystitis has been revolutionized since the invention of the cystoscope. We are especially indebted to Nitze and Pawlik for their instruments for examination of male and female bladders. Careful inspection and study of the actual pathology of the bladder is now possible under direct observation, and, aided by a thorough bacteriological examination, we are able to understand, diagnose, and treat cystitis as was formerly impossible.

The morbid conditions found in acute cystitis vary greatly as to the stage of the disease and the particular cause, but pathologically the disease may invade the mucosa alone, the interstitial and muscular

tissues, or even extend to the pericystic tissues. In the early stages of cystitis the cystoscopic examination shows the blood-vessels to be less sharply defined than in the normal bladder, and soon the light color of the mucosa assumes a deeper hue, until at last the outlines of the blood-vessels are lost in a uniform deep red. The epithelium may be cast off in places and a croupous exudate collect in shreds over the mucosa. The area most affected is usually the trigonum, the urethral and ureteral orifices, and even though the whole bladder is involved we find the most pronounced lesions in this region.

The following clinical and pathological varieties of cystitis are of importance from a diagnostic standpoint: Superficial or catarrhal cystitis is characterized by a redness, swelling, and exfoliation of the squamous epithelium. Erosions, ulcerations, and abundant suppuration may follow. The urine is usually acid in acute and becomes alkaline in the chronic stage. The greater the alkalinity the more advanced is the disease, and, upon cystoscopic examination, we note a grayish-white colored area containing muco-pus.

Suppurative cystitis may follow the catarrhal, or even begin as such from the first, and involve the superficial and deep structures of the bladder wall. This is a stage between the catarrhal and the ulcerative, and it is hard to draw any accurate pathological distinctions.

Ulcerative Cystitis. This is generally a later stage of the suppurative variety, and results in circumscribed areas of necrosis or ulcers. A single ulcer is rare in this type, and when it is found more properly belongs to another type, as in gastric ulcer. Fenwick, of London, in his new book on ulceration of the bladder, calls this single ulcer spontaneous. He has met with it chiefly in young men about twenty years of age. It gives rise to hematuria and frequent micturition, and causes much puckering when healed.

In ulcerative cystitis the ureters and kidneys are liable to be infected, and when a cure occurs we have much cicatricial contraction. A cystoscope is indispensable for the diagnosis of these conditions.

The exudative and exfoliative types of cystitis have been considered by some authorities, but they are really only different stages of the preceding varieties.

The diagnosis of cystitis, in its various pathological phases, is made by two methods, namely, by examination of the urine and by observation of the bladder with a cystoscope. The chemistry of the urine is of little value, but the microscope will reveal much. Pus-cells, triple

phosphate crystals when cystitis is alkaline, bacteria, etc., are easily found with the microscope. We should always stain for the tubercle bacillus when examining a case of chronic cystitis.

Bacteriological cultures should be made in all doubtful or stubborn cases, and the urine should be procured by aspiration above the pubic bone to avoid contamination of the urethra. This is an easy operation and devoid of danger.

In regard to the cystoscopic examination, we should use Pawlick's or Kelly's method, or any of the modifications, as Koch's, to examine the female bladder, except in cases where we wish to balloon or distend the bladder walls, in which case we should prefer a Nitze or Casper irrigating and catheterizing cystoscope.

Preston, of this country, has of late invented or modified a cystoscope in which he uses air to dilate the bladder instead of water, but this could also be done with the Nitze or Casper as well. There have been many objections raised to the use of air in this work, and Fenwick strongly condemns the method.

In acute cystitis, cystoscopic examination is contra-indicated. A few points for differential diagnosis between tubercular and gonorrheal cystitis are the following:

Tubercular.	Gonorrheal.
1. Located chiefly about the trigone.	1. Not at all so confined.
2. Inflammatory reaction zone absent.	2. Clear inflammatory reaction zone later changing to a brown color.
3. Rare.	3. Often seen.
4. Small tubercles.	4. No tubercles.
5. No projecting tufts of pus.	5. Projecting tufts of pus.
6. Bacillus tuberculosis.	6. Gonococcus.

In all doubtful cases catheterization of the ureters should be done to eliminate kidney disease, as the finding of bacteria and pus in the urine will not alone diagnosticate cystitis. As regards the treatment, we should always be guided by the cause and stage of the disease.

In cystitis due to bacterial infection the first indication is rest in bed, light diet, opiates, preferably in form of extract of opium and belladonna in suppositories as often as needed; citrate or acetate of potass. to render urine less acid and prevent irritation. As soon as the subacute stage is reached, give the patient a tablet of urotropin, which is an ammonia formaldehyde salt, three or four times a day. This liberates formaldehyde gas in the urine, and is our best germicide. Saloform is another preparation especially indicated in a rheumatic

diathesis. Boric acid and salol have long since been discarded by most of the genito-urinary surgeons.

Irrigations of the bladder are in less favor to-day than formerly, but in cases where much granular debris is present they will aid to clean out the bladder.

Self-retaining catheters are used by many to put the bladder at rest and drain, but as a general rule they are poorly borne and occasion much irritation. Curetting ulcers in chronic cases has been done by Fenwick, Cumston, and others with splendid results; also applications of silver nitrate, etc., have been found beneficial.

In the case of stone in the bladder, which has been followed by infection, remove the stone by suprapubic cystotomy. An acute perforating ulcer should be treated by laparotomy, the same as a gastric ulcer. In tuberculosis the diseased area of the bladder is now often curetted or removed.

In conclusion, I would say of the treatment to first find the true cause, and we can then always institute the proper and successful treatment. Our failure in the past to successfully treat cystitis has been due to applying the same methods of treatment to a great variety of diseased conditions due to independent causes, and not selecting our remedies with careful investigation and regard to the true etiological factors.

LOUISVILLE.

VARICOCELE AND ITS RADICAL CURE.*

BY HARRY C. WEBER, M. D.

Lecturer and Clinical Instructor on Genito-Urinary, Venereal, and Skin Diseases in Kentucky School of Medicine; Member of the Louisville Society of Medicine, Kentucky State Medical Society, etc.

Varicocele is a venous dilatation and elongation of the pampiniform plexus of veins, and is an affection of puberty and young manhood, usually appearing between the ages of sixteen and twenty-five, and as a rule disappearing after middle life. It is rare in infancy and seldom seen in old age, giving little inconvenience before puberty, and is nearly always a left-sided disease, and practically never occurs on the right side for anatomical reasons. In most instances it develops slowly and insidiously and without pain, but in exceptional cases it comes on rapidly and with great pain. During a period of six years in the

* Read before the Louisville Society of Medicine, January 8, 1901.

genito-urinary clinic of the Kentucky School of Medicine I have seen but one case of varicocele in the negro.

The causes are the following: Anatomical peculiarities are great factors. The length, position, tortuosity, and pressure caused by the contraction of the abdominal muscles on the veins and feeble *vis-a-tergo* owing to the great length and small caliber of the spermatic artery. The left spermatic vein empties at right angles into the corresponding renal vein, and may be pressed upon by the sigmoid flexure when distended by fecal accumulation. Modern method of dressing and heredity may be causes; hernia and tumors in and near the groin, ungratified sexual desires, masturbation, and excessive venery, inflammation, epididymitis, and traumatism. Some authors claim there is a valve on the right side at the junction of the spermatic vein and the vena cava which prevents the damming of the blood.

The patient complains of a sensation of weight and dragging pains, which may extend to groin, loins, and lumbar region; dull, aching pain in the testicle at times and tenderness of veins and cord. All of these symptoms may be increased by heat, overexertion, jolting, or riding a bicycle. Fatty and calcareous degeneration may take place. Elongation of the scrotum, atrophy of the testicle, and want of sexual power are frequent symptoms; derangement of the digestion, melancholia, headache, and nocturnal emissions. The mental symptoms are many and varied, and an operation is necessary for their relief. The tumor has the appearance of a bag of angle-worms, which partially or completely disappears on lying down, but reappears on standing, increasing in size gradually from below upward. Pressure exerted over inguinal region does not prevent the appearance of the tumor.

Considering the treatment, I prefer to give the patient a thorough purgation and shave the pubes and surrounding parts. After a general bath, scrub the field with soap and water, wash with a one to two thousand bichloride solution, and follow with ether. Under general or local anesthesia make an incision through the skin over the pampiniform plexus an inch and a half long, beginning just below the external abdominal ring. While your assistant picks up the fascia with a pair of tissue forceps on one side of the incision, you do likewise on the other, and with a bistoury gradually divide down to the sheath of the cord, separating the vas deferens, arteries, and nerves from the veins with the fingers. Transfix a ligature of number

one catgut at the upper and lower extremity of the incision around the veins, about two inches apart. Run a suture through the center of the cord, extending behind each ligature, and with the scissors cut out the intermediate portion of the veins, leaving each stump one fourth of an inch long. Approximate the ends of the veins with the ligature just introduced, tie securely, and trim off the superfluous ends of the suture.

Close the scrotum with as many interrupted silk sutures, dipped in bichloride, as is necessary. Put on a double spica bandage supporting the testes well upon the pubes. Move the patient's bowels after the second or third day, and remove the stitches from the scrotum on the third or fourth day. Instruct the patient to remain in a recumbent position, using the urinal and bedpan for four days; then after the seventh day put on a close-fitting suspensory bandage. He may resume his business after the tenth day, wearing the suspensory until the swelling and infiltration have disappeared from the cord. I have never had a bad result.

LOUISVILLE.

A SINGULAR CASE OF INSECT BITE.*

BY T. B. GREENLEY, M. D.

On March 20th, in the evening, Mrs. C. was bitten on the middle finger by an insect in shape of a worm, about half an inch long, with black head and white body. She was eating a banana when the insect grabbed her finger. It was within the rind of the fruit. She informed me that it was somewhat savage in its efforts to bite, and lacerated the skin, making an open wound.

In a very short time her finger began paining her, and slight swelling took place. The pain soon extended up her arm to the shoulder, and made her quite nervous, rendering her unable to hold her arm and hand still. When I visited her she was in so much pain and so nervous I administered an hypodermic injection of morphia and atropia, which in half an hour rendered her comfortable. I kept the finger wrapped up with raw cotton moistened with turpentine.

21st. Saw the patient twice to-day. She was complaining of pain in her arm and side, and still nervous. I kept her on powders of morphia, to be given sufficiently often to control pain and nervousness.

* Read before the Muldraugh Hill Medical Society, April 11, 1901.

22d. About same. Her temperature was not affected by the insect bite, but it had a depressing effect on the heart. She had to keep in bed on this account, as she came near fainting several times on assuming the erect position. On this account I gave her heart supporters, strychnine, digitalis, etc.

23d. Symptoms pretty much the same, only not quite so severe. Same treatment continued, keeping her bowels gently relaxed.

24th. Much relieved and dismissed, only to continue heart tonics as required. On the next day she could be up and felt about well.

The insect was destroyed at the time of the bite, which I regretted, as I would like to have seen it. I am unable to give a genesis of it. It must have been a young insect of a poisonous character, having the banana for its habitat, and perhaps may be developed into a large and very dangerous insect of a poisonous character. It is possible that they remain in the banana during their embryonic state, and at the proper time escape to the surface of the fruit.

I have heard of poisonous insects being imported with the banana, hidden in the bunches, called tarantula, a spider-like insect, the bite of which is very poisonous and dangerous. But from the description of the little worm by the patient there would have to be quite a metamorphosis effected to have converted it into a spider-shaped insect. From its description it resembled a centipede much more nearly, being in the shape of a worm and having legs.

MEADOW LAWN, KY.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, March 15, 1901, the President, Louis Frank, M. D., in the Chair.

Subserous Fibro-Myoma of the Cervix. Dr. Louis Frank: The specimen which I exhibit was removed this morning at my clinic in the Kentucky University, a large subserous fibro-myoma, undergoing gangrenous degeneration or sloughing, not from constriction, however.

The patient presented herself at the clinic some days ago, but I did not see her then, and only saw her this morning before she was operated

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

upon and made an examination. I then found a large tumor protruding or extruded from the vulva. It was larger than a fetal head, and had a nasty, stinking odor because of the necrotic changes which had taken place.

On examination primarily it was difficult to say whether we had to deal with an everted uterus or a tumor; but by bimanual palpation we were able to feel the uterus lying low in the pelvis, almost at the outlet, and to also detect the small opening of the cervix.

This tumor sprang from high up in the cervix, and had been passed out, extruded into the vagina, where the woman had been carrying it for four or five years, following her avocation as laundress and cook. A week or ten days ago it was extruded from the vagina into the outer world, where she has since been carrying it, going about constantly. It was removed by making a "V" shaped incision and taking away the entire anterior lip and the tumor with it. The growth had a pedicle about one and a half inches in length and perhaps two inches in diameter. Less than four per cent of fibroid tumors spring from this region, and of these most originate in the posterior wall. It is not an ordinary polyp, but is a true fibro-myomatous tumor. The woman had bled a great deal, and was in bad condition. The tumor had escaped from the cervical canal into the vagina, so that it had entirely obliterated the anterior lip, this part of the cervix being really a part of the pedicle of the tumor. The posterior lip had entirely disappeared, so that it presented a perfectly smooth surface, making it appear as if the vagina was pulled inside out.

There was little bleeding from the operation. The woman was suffering from sepsis at the time, due to absorption from the necrotic area.

A Case without Diagnosis. Dr. B. C. Frazier: I was called to see a young lady one week ago last Tuesday night; she was suffering intensely with pain, breathing fifty or sixty times to the minute, pulse 130, temperature 102.5° F. Every few breaths she would moan or scream out with pain, this being referred to the right side in the region of the lung. She had a chill that afternoon. I thought, of course, that I had a case of incipient pneumonia to deal with. She was suffering so intensely that I gave her an hypodermic of one-fourth grain morphine.

Wednesday morning her pulse was 100 to the minute, temperature 100° F., and she was breathing thirty times to the minute, feeling

decidedly more comfortable. She had no cough, and gave the history that bowels had been constipated for two or three days. I gave her a brisk calomel purge, and she spent a fairly comfortable day until late in the afternoon, when she was taken with intense pain again over the liver, with an occasional sharp shooting pain in the left shoulder.

She was given nothing that night, but continued hot applications by means of the hot-water bag were used. The next morning they telephoned me, and I reached the house shortly after seven; she said she had slept poorly the latter part of the night, pain having become greater. I examined her carefully again, but could not find any evidence of trouble in the lungs. At that time she was having pain across the abdomen below the stomach line and around the right side at about the lower border of the ribs, occasionally so intense that she would cry out and could not be moved. Every effort she made to move in bed would bring on a paroxysm of pain. I ordered a high enema, which was followed by the passage of considerable gas, and some relief was obtained. I did not give any more morphine, but prescribed antikamnia and codeine tablets (one-fourth grain of the latter); she took one every hour, and when three had been taken she again felt quite comfortable.

Late in the afternoon of the same day they sent for me again, and I found they had almost blistered her side with the hot water bag. I ordered another high enema, following which she had two or three copious actions, and her sister said passed some pus.

The following day she was still doing badly, and I asked Dr. Louis Frank to see her with me. He made a careful examination and came to no positive conclusion, except that he believed there was some trouble about the gall-bladder. She had no jaundice at any time. The tongue was furred, and her temperature ranged from normal to 101° F. I gave her another purge with salines, after which she became more comfortable, and rested fairly well that night.

The next day I gave her some of Kutnow's powder, which, as you know, contains Carlsbad salts. This seemed to relieve her. Pain after that was referred to the left side, in about the same region as it had been on the right. Last night she rested well, and to-day is much more comfortable than at any time previously, having had two or three actions from the bowels after taking Kutnow's powder. I have had her drinking vichy water for a couple of days, which has seemed to act favorably.

She is now able to turn herself in bed, and is quite comfortable, getting up to use the vessel, etc. She has had no nausea or vomiting at any time.

Discussion. Dr. A. M. Vance: I would be rather skeptical about the idea that any pus had been seen in the evacuations. I should take it that this is a case of acute empyema of the gall-bladder. I do not believe it is abscess of the liver, and pus came too soon after the initial symptoms to be an abscess opening into the bowel. I do not believe it is appendicitis. I think what the sister saw was mucus and not pus. From the symptoms detailed I believe pus will be developed, and will have to be let out.

Dr. Louis Frank: I saw this patient at Dr. Frazier's request a few days ago, and looked upon it as a case of gall-bladder trouble. I take it this girl has a catarrhal inflammation of the gall-bladder and the ducts, probably from stone, which has resulted in the formation of some pus, which she has discharged by the bowel, and has thereby gotten relief. This case is in some respects like cases of appendicitis where the pain is sometimes referred to the opposite side.

I advised exploratory incision if the trouble did not clear up in a day or two. I still believe it is gall-bladder trouble, and that Dr. Frazier will have to operate upon the girl sooner or later.

Dr. B. C. Frazier: She has had no other chill except the initial chill the afternoon she was taken sick.

Case of Articular Rheumatism. Dr. T. H. Baker: A case of acute articular rheumatism of moderate severity, running the regular course, on the third day developed some rather peculiar complications. I was called early in the morning, the information being sent me that the patient was dying, choking to death. When I reached the house I was informed by the family that the patient was speechless, and had not been able to swallow any thing for several hours, not even a drop of water, and seemed to be suffering intensely. He had a very rapid pulse, bathed in cold perspiration, temperature practically the same as it had been for a day or two— 101° to 102° F.

My first impulse was to give him an hypodermic of morphine, and then visions of that very serious throat trouble (edema of the glottis) came through my mind, and I did not do any thing, but telephoned for a specialist. The specialist came and made a very thorough examina-

tion, but found nothing wrong with the throat beyond congestion and a little swelling. He advised the administration of morphine, which was given.

I may say that this occurred in a hard-working mechanic, certainly not of a nervous temperament, a man thirty years of age. The specialist attributed the trouble to salicylate of soda in doses of fifteen grains each every three hours which the patient had been taking. An hour after the administration of morphine the man was comfortable, and two hours afterward he was able to swallow water, and there was gradual subsidence of the throat complaint.

I would like to know if any of the members present have seen results of that character following the administration of the salicylates. I have never met with a case of the kind before, and it was alarming to me. I am yet at a loss to know what was the real cause of the trouble, or whether there was any real trouble beyond a nervous manifestation.

Discussion. Dr. William Cheatham: The salicylates could produce a nervous element very readily. Rheumatism alone would account for pain on swallowing, without any local symptoms appearing. The salicylates might give difficulty in breathing without any edema; nervous.

Dr. H. H. Grant: I have had under observation a case of rheumatism which has taken a rather singular turn. It was also a mild case, such as Dr. Baker has reported, with very little swelling of the joints, but with more or less evidence of depression without any heart involvement up to the fifteenth day. In this case salicylate of soda was given in five-grain doses every three hours until about four hundred grains had been taken in two weeks. During this time the patient appeared to be very little ill at any time, except the pain that he complained of, first in one joint, then in another, without a great deal of swelling; but he rested badly. He took McMunn's elixir of opium several times to get rest and to quiet his pain, but during the last four or five days it was difficult to get him to sleep; chloral was used without result, as was also chloretone, antikamnia, and sulphonal, but nothing succeeded in giving him much rest. He did not sleep soundly at any time.

On Wednesday night he began to be a little delirious. Up to this time his temperature had not been over 101° F. On Thursday his temperature ran up to $102\frac{1}{2}^{\circ}$ F., on Friday to $103\frac{3}{4}^{\circ}$ F., and evidences of cerebral disturbance increased. Thursday night he rested badly, and

on Friday he was more markedly delirious than at any other time, though not violent. When roused up he knew everybody and would answer questions intelligently, still he was apparently half astray in his mind even at best.

His condition was about the same on yesterday when he was seen by Dr. T. H. Stucky. The bromide of potassium in twenty-grain doses every two hours and the application of the cold coil to his head were employed on Thursday night, on the idea that we were dealing with cerebral rheumatism; his pulse at this time was 90; his heart had a muffled sound, but no distinct murmur.

To-day his intellection is about the same; he did not sleep much last night, although he took twenty grains of bromide of potassium every two hours until he had taken two hundred grains. He is easily aroused, his face a little flushed, but his appearance is that of a perfectly clear mind when you look at him. When you speak to him, while he realizes that he has been spoken to, and realizes that he has been sick two weeks, he is still constantly delirious, and it is certainly not a delirium due to fever. Every thing points to a congestion of the brain, and it appears that the condition is one of cerebral rheumatism. His heart intermitted several times during last night; as much as every six or eight beats it would drop one, but there was regularity in it aside from this. This evening his temperature is 101° F. and his pulse 90. His bowels have been acted upon very freely during the attack, and his nourishment has been fairly well kept up.

At the present time he has the appearance of being very ill, with a temperature which has never been quite 104° F. at any time, and most of the time it has been less than 102° F.—it is 101° F. to-night. The man is also unable to void his urine when lying down, and he has to be helped up every time his bowels act. Pain in the joints is nearly all gone.

I have never seen a case of cerebral rheumatism before. This patient is a man, fifty-five years of age; he has been a very free liver all his life; not exactly a temperate man, but never what we would call intemperate. His urine has been examined several times during the attack, and always found normal except a large amount of phosphates. There is no history of specific trouble. He has had no headache at any time, and for this reason I have been led to hope that it might not be cerebral rheumatism, as severe headache nearly always accompanies this disease.

Discussion. Dr. B. C. Frazier: The doctor mentioned two hypnotics—sulphonal and chloretone—either one of which, if pushed, I think would produce sleep. I do not believe either one is dangerous, and it has been my experience that if either is pushed sleep will be produced.

Dr. A. M. Vance: I would like to ask Dr. Grant if he thinks the man had taken enough alcohol before the attack to have any influence in the case because of its withdrawal? My experience in surgical cases is that men of this age who are in the habit of taking three or four drinks a day, if the alcohol is withdrawn they often get into a mental condition similar to that mentioned by Dr. Grant. I would not be surprised if that had some influence in this case.

Dr. Louis Frank: We know that in cerebral rheumatism—so-called—there is supposed to be an effusion; if this man had an effusion, would we not have symptoms of pressure or more marked symptoms referable to the brain? Again, if he had an abscess or lesions sufficient to produce a marked pressure effect, would he have such a marked elevation of temperature? I would be inclined to think if there was pus in the brain he would be more apt to have a subnormal temperature. Again, would the administration of such an amount of the salicylate of soda have any effect in the production of such symptoms? I do not know, but it strikes me that from the action of salicylate of soda in producing marked tinnitus there must be some marked action upon the cerebral circulation, and might this not in itself produce some cerebral symptoms?

Dr. William Cheatham: I saw an article not long ago in a medical journal on the subject of rheumatism, where some one warned us against the use of so much salicylate of soda, claiming that it produced too much alkalinity of the blood. I think an active purging kept up for some time, depleting the man in this way, would be of benefit. If it is cerebral rheumatism, I believe the application of cold would be dangerous.

Dr. H. H. Grant: In regard to the amount of salicylate of soda given this patient: He took within about ten days two hundred grains of Merrill's salicylate of oil of wintergreen. It is generally claimed that the pure oil of wintergreen will not produce any disagreeable symptoms.

I looked up the subject of cerebral rheumatism in Pepper's textbook, and found that he recommended the application of cold in cerebral manifestations. The criticism of Dr. Cheatham is one that

would likely arise in the mind of every practitioner, yet Pepper makes the positive statement that cold will not do any harm in this form of inflammation. I believe that this condition is one of effusion, that there is an effusion into the ventricle of the brain, and the condition is one of inflammation of these serous surfaces, such as we see in inflammation of the joints, and that this man has some compression of the brain.

The subject as I looked it up in the text-books indicates that there are at least three forms of cerebral rheumatism: One in which there is a distinct inflammation of the brain with extensive effusion; one merely a complication due to elevation of temperature and the congestion naturally resulting from it; the other where there is merely a simple congestion of the brain with a low rate of temperature. The prognosis is unfavorable in those cases in which there is a large amount of effusion, and most of these patients die. Those cases in which there is simply a congestive manifestation are more subacute in character; the patients are fairly expected to recover. In those conditions in which slight delirium is an accompaniment from elevation of temperature seen oftentimes in rheumatism, this is simply a co-incidence, and in most instances the patient is expected to recover. I found also in the same text-book that only about three per cent of all cases of rheumatism present symptoms of inflammation of the brain. [Salicylates will produce delirium and temporary mental derangements. We have observed two such cases, both in rheumatics over sixty years of age.—EDS.]

The essay of the evening, "Four Stab Wounds of the Abdomen," was read by H. Horace Grant, A. M., M. D. [See p. 287.]

Discussion. Dr. A. M. Vance: I can recall five knife wounds of the abdomen in my experience, and I saved only two out of the five. The other three illustrated most decidedly Dr. Grant's point that all stab wounds of the abdomen ought to be explored. I will briefly relate two of them, where death resulted from overlooking this important step.

A woman was stabbed with a butcher-knife in the hands of her lover, the knife entering on the right side just above the free border of the ribs. She was seen by a doctor in the neighborhood, and a number of strips of adhesive plaster were put across the wound, which was four inches in length. She was then carried to the female ward in the city

hospital, Dr. Lieber being the surgeon then in charge. The stabbing occurred at eleven o'clock at night. At eleven o'clock the next morning I was asked by telephone to see the patient as a substitute for Dr. Lieber. I found a splendid specimen of young womanhood lying in bed, good countenance, pulse 90, temperature 99° F. She said she felt very good. I took off the adhesive plaster, and as the wound seemingly extended only down to the ribs, I sewed it up, thinking it was simply a small wound of the chest wall. Twelve hours afterward the woman died. She had no sign of peritonitis; her abdomen was not distended, not even tight. Post-mortem revealed that this large knife blade had slipped around the ribs, that the intestine was cut entirely in two, that the knife had even wounded the mesentery and the fourth lumbar vertebra, and the abdomen was filled with blood. Evidently at the time I saw this woman her wonderful vitality had brought about a reaction, and I saw her just as nature had gotten the temperature to 99° F. and had brought her pulse up.

In another case a man came into the city hospital with a knife wound of the abdomen which had been sewed up, and with the message that all the damage had been repaired at the place where the injury was done. He was in good condition. Both these cases were seen by me several hours after the accident. Post-mortem in the second case twelve hours after the man entered the hospital revealed that he had seen seven or eight wounds of the intestine.

Take another phase of the subject: A young man at an Indian show was stabbed three times in the abdomen, the omentum and intestine protruding from all the wounds. He was carried to St. Mary's Hospital, where I saw him at two o'clock in the morning. He was the dirtiest specimen of humanity that I ever saw. He was taken into the operating-room in absolutely good condition; there was not even any shock. I examined the intestine which was outside the cavity and found no wound, and there was no blood in the cavity. I remember I introduced a large sized irrigation tube into the wound on the left side, and, as was the custom in those days, irrigated the cavity with a weak carbolic solution, the water coming out the other wounds. I sewed up all the external wounds, and in six days the man was selling peanuts at the circus again.

I believe that all wounds of this character, where we have any reason to believe the knife has penetrated the peritoneum, ought to be thoroughly explored.

The fact that all of Dr. Grant's patients were stabbed in the left side is explained by remembering that the majority of people are right-handed, and in most cases the assailant standing in front of his victim, a stab wound is inflicted upon the left side.

I recall another case where a man died of hemorrhage from a wound of the common iliac artery, though he lived five days. He was in a desperate condition; a number of wounds of the small intestine were sutured, but the bleeding was so extensive that the abdomen was packed with gauze, and he was gotten off the table to save an immediate death. Post-mortem revealed the fact that the common iliac had been wounded by the knife.

The principal lesson contained in the paper is that we should explore all these wounds as thoroughly as circumstances will permit, and repair the damage found.

Dr. T. L. Butler: I agree with Dr. Grant and Dr. Vance in regard to the importance of exploring all of these stab wounds of the abdomen. I believe it just as important to explore these wounds as it is gunshot wounds. In my own experience, I believe I have operated upon but two stab wounds of the abdomen, and one of them illustrates this point. A young man was stabbed in the right side about three inches from the anterior superior spinous process of the ilium, and between it and the umbilicus. This case I saw with Dr. Turner Anderson. The man was drunk at the time of the accident, and pretty drunk when he was removed to St. Mary's Hospital. He was not in very great shock, and was otherwise in fairly good condition. He had one very innocent-looking external wound. We opened the abdomen and read the gut, and as we would come to a wound in the intestine we would repair it, and kept on until we had sutured twelve wounds in the ileum. Presumably the party who stabbed him had left his knife in the hole and "churned it," to use a common expression. After sewing up these twelve wounds we flushed the cavity with normal salt solution and started up the most profuse hemorrhage that I have ever seen, coming apparently from the external iliac artery. Of course we could not attempt to find the bleeding point, but crowded gauze in and controlled the hemorrhage in this way. This man lived thirty-six hours, and the post-mortem demonstrated that we had overlooked one wound—that he had thirteen wounds of the small intestine.

[The unlucky number evidently caused death in this instance.—Eds.]

Dr. W. O. Roberts: The only case of stab wound of the abdomen involving a wound of the intestine that has come under my immediate care was one that occurred in 1887. In this case a man was stabbed in the abdomen, and was immediately taken into a drugstore nearby, where the wound was sewed up; then he was removed to the St. Joseph's Infirmary, where I saw him about two hours after the stab was received. He was bleeding considerably at that time. A laparotomy was decided upon. When the abdomen was opened it was found that the knife had gone through the intestine and also through the mesentery, and the hemorrhage was from the vessels of the mesentery. I repaired the intestinal wound, which had to be reopened and resutured, on account of the manner in which it had been sutured originally. According to a report of Sir William McCormack, of the College of Surgeons, London, this was the second case on record where the abdomen had been opened for wounds of the intestine. This patient got well, and some years afterward—I suppose ten years later—he came to me for treatment for stomach trouble, and I found him suffering from a cancer of the pylorus. I could not feel the tumor through the abdominal wall, but where this incision had been made in his right side he had a hernia, and I could pass my hand in without trouble, and felt the tumor of the pylorus. He went on from bad to worse, until finally I did a gastro-enterostomy, putting in a Murphy button. He lived ten days, but the button never came away. I think he must have had a stricture of the intestine, which did not allow the button to pass. No post-mortem was made, but I take it this was the cause of death. This is the only case I have seen where the intestine or any of the viscera were opened by a knife wound.

I have seen two or three cases where it was uncertain in my mind whether or not the wound had penetrated the abdominal cavity, and under chloroform I immediately made an exploratory operation to satisfy myself that the wound had not penetrated. I believe, as all of us do, that in all cases of wounds of the abdominal wall it is important to investigate them at once.

Dr. A. M. Cartledge: I believe that exploration should be done in every case. This is one feature of this subject that needs revision. Until a short time ago, and in some sections at present, it is advised that in stab wounds of the upper segment of the abdomen the case should be treated upon the expectant plan, and the external wound closed. In this day, when we can do clean abdominal surgery and

enlarge the wound without additional danger, certainly eliminating that element of risk which attends the expectant plan of treatment where there might be a wound of some hollow viscera, in my experience stab wounds have not been attended by any very large mortality, especially in the upper segment of the abdomen.

In regard to irrigation of the abdomen, I am getting more and more away from it. I would be opposed to irrigation, believing the trouble was largely localized at the entrance of the knife, closing with or without drainage, as might seem best, but without irrigation.

Dr. Louis Frank: I do not believe there is any longer a question as to what should be done in these cases. These wounds should be explored, and the damage repaired and treated along the lines upon which we treat all abdominal wounds at the present day.

Dr. H. H. Grant: Two points have come up in the discussion to which I think it might be fair to allude. One is, as shown by the statements of Drs. Vance and Butler, that in the presence of tremendous hemorrhage fear that the patient might die on the table led them to do imperfect surgery and hasten the patient off the table and into bed. I have done the same thing; I have no doubt all of us have. I have firmly made up my mind, however, that I will never do it again. When I see that there is a chance to relieve the conditions present, I shall take the risk of the patient dying on the table and complete the surgery. It has never been my misfortune to have the patient die on the table where I was the operator. I have seen conditions of the greatest gravity arise, and I believe it is the duty of the surgeon when he undertakes an operation not to be deterred by the presence of danger, which he fears might affect his reputation if he did not hasten the patient away without completing all the operative steps that were presented to him. Not only in the presence of hemorrhage, but in the presence of very considerable shock, I have seen patients hastened off the table, and I believe in my experience I have seen at least one perish that could have been rescued by a little more complete work.

The other question is that of irrigation. Dr. Cartledge did not hear what I said in the paper in regard to irrigation, and the views that I entertain upon it. I firmly believe if there is septic matter which will do harm locally, it will do less harm if it is disseminated and diminished in its virulence by irrigation, and that all septic processes, septic spots or material that we can localize, which we would remove if we could see it, and if we only suspect it—why we should hesitate

more than if we knew it was there is a matter I am satisfied there is some mistake about.

With regard to drainage: I have had a very unfortunate experience in a recent case by not employing drainage, where I believe I could have saved my patient by it in an operation done for appendicitis, in which there was apparently no septic matter, and in which I closed the wound without either irrigation or drainage. But I am firmly convinced if I had left the lower angle of the wound open, though there was no evidence of distinct sepsis, still there was congestion and the patient had two chills before the operation; if I had not closed up this wound completely, putting in a drainage-tube, I believe I would have saved the patient. In those cases I can not see any possible harm to come from drainage or irrigation where we know the case is septic. All the instruments which inflict these knife wounds are septic; they pass through septic clothing, through dirty skin, and they are likely to carry in a portion of the clothing; and it is my belief that in these cases it is advisable to thoroughly wash out the abdominal cavity. If there is simply a skin wound which exploration of the finger shows has not penetrated the abdominal cavity, there is no necessity for drainage; but I believe we are going to establish the principle, and we should establish it on these rules, that all these cases should be irrigated and drained.

Foreign Body in the Esophagus. Dr. William Cheatham: I have reported several cases of foreign bodies in the esophagus recently. Last Monday I was called to see a lady who had had a bone in her throat for four days. They called in a neighboring doctor, who stated there was no foreign body in the throat; that it had passed down, and that the present trouble was due to an abrasion produced by the bone. The patient located the foreign body near the sternal notch; she had been unable to swallow any thing for two days. With an ordinary horsehair bougie I removed the bone which I show you. It is sharp, and is a very ugly foreign body to contend with, more than an inch long. Three days afterward the patient came back complaining of pain on swallowing. I gave her some orthoform troches, told her to sip hot water, etc., and have heard nothing from her since.

I saw a patient on the street yesterday whose case I reported to this Society some years ago. A man came to my office one morning complaining of difficulty in breathing, with symptoms of obstruction about the larynx, and found that he suffered from quite a severe inflammation

of the larynx. It was Dr. Dugan's hour at the Louisville Medical College; I hurried the patient over there, and Dr. Dugan performed a tracheotomy. The man had a history of syphilis. I saw him on the street yesterday, and he is still wearing the tube; he has worn it for eight years. His voice is now very good, and I think he could probably leave the tube out with safety.

Discussion. Dr. J. M. Ray: I remember Dr. Cheatham reported several cases of this kind not long ago, and in the discussion I mentioned a patient who has since returned, and I sent her to see Dr. Butler. It was a case where there was originally a foreign body in the esophagus, and a physician used a whalebone bougie in attempting its removal. Several months afterward she had a recurring cellulitis of the neck. I sent her to Dr. Butler, thinking possibly he could locate something with the X-rays; I believe he opened an abscess.

Dr. T. L. Butler: I presume you remember Dr. Ray's report of this case at the time. The woman was sent to me about three weeks ago, and at the time she had a swelling which seemed to be pretty evenly divided over the anterior portion of the neck about in the neighborhood of the cricoid cartilage, extending from this point downward. It was quite hard and red; it seemed to extend more to the right than to the left; in fact, it could be traced toward the right side, although it extended somewhat toward the left side. She came to me one afternoon during my recent illness; I gave her some local application and told her to return in a few days. When she came back the swelling had developed into an enormous abscess; I sent her home, and next day went to her house, as she refused to go to an infirmary, and opened the abscess in the median line, liberating half a pint of foul-smelling pus; there was also more or less air in it. It smelled like the pus from an ischio-rectal abscess. I inserted my finger and followed the tract backward, and it went so far back that I thought it would reach the vertebra. I thought possibly I had gotten into a tubercular abscess connected with the vertebra, when it suddenly turned toward the esophagus. I explored the abscess cavity thoroughly with my finger and could find no foreign body; I felt about in the esophagus, but could not find any foreign body there. She began to spit up blood, so I knew I was in the esophagus; aside from this I could tell by the sense of touch. I put in a drainage-tube and treated the case in this way for several days; the fourth day I noticed the tube was obstructed;

I took it out, and found a piece of cartilage in it. The cartilage resembled very much the decalcified bone-tubes that were used some years ago. I took this to the office and put it on my table, and, unfortunately, it was thrown away. The next day another piece of the same material, about the same size, was found in the tube. I turned the last piece over to Dr. Blue for examination, but have not yet heard from him. These are the only foreign bodies that came out of the wound. I then removed the tube, having shortened it from day to day after it had been in a week. She was at my office several days ago, and the wound is about closed. She was fed on fluids for ten days, and for the first few days a little of the fluid would come through the tube. Since then this has not occurred; she is very much more comfortable, and seems to be about well. Her temperature at the time of the operation was 102° to 103° F.; since then it has been normal; once or twice a little subnormal.

Dr. T. C. Evans: Speaking of foreign bodies in the esophagus reminds me of a case that I saw this evening. I was called about six o'clock to see a child two years old, the mother stating that the child had swallowed an open safety pin, which had become lodged in the upper part of the esophagus. By the time I reached the house the child had evidently swallowed the pin, as it could not be located in the throat. It was an ordinary safety pin, about two inches in length. I hardly thought it possible that the child had swallowed the pin wide open, as the mother described it to be; but careful search was made over the room and the pin could not be found. The child had vomited considerably, and also had some dyspnea at the time. The only conclusion was that the pin had gone into the child's stomach. I would like to know what the experience with foreign bodies of this kind has been; whether it will do any damage or whether it will pass in the usual way.

Probable Chancre of the Lip. Dr. F. C. Wilson: A few days ago a young girl was brought to my office by her mother. She had a festering sore on her lower lip; there was considerable hardness about its base, and it struck me at once as having somewhat the appearance of a chancre, and I rather jokingly asked the girl if she had a sweetheart, and if she had been kissed by him. No satisfactory answer was obtained, as I had no opportunity to question her apart from her

mother. I directed her to come back in a few days. She came back to the office to-day by herself, and I questioned her a little further in that line, and she then admitted that a young man had been visiting her, and he had kissed her *once*. And she mentioned the fact that this young man had been taking medicine; I asked her how long, and she said about six months, so it seemed pretty clear to me that this was a specific sore, and it was traceable to this young man through osculation. I am satisfied that it is specific in its nature, and told her to keep it covered with calomel; to keep it as clean and free from irritation as possible. That girl is but sixteen or eighteen years of age, and is going to school. I cautioned her particularly about kissing anybody else, and will probably put her on specific treatment.

Discussion. Dr. A. M. Vance: I think it is rather unusual for a chancre of the lip to be present for any length of time without marked glandular enlargement. This is much more frequent where the chancre is about the mouth than when it is about the genitals. I have never seen an extra-genital chancre in this location without decided lymphatic involvement. If the chancre is located in the center of the lip the glands will be found enlarged on both sides of the neck; if located on the other side of the median line the glands will be enlarged on that side. I would advise Dr. Wilson to wait for decided secondary evidences before putting this girl on anti-syphilitic treatment.

Dr. T. C. Evans: I have seen several chancres about the lips, mouth, fauces, etc., and in every one there was marked enlargement of the adjacent lymphatic glands.

Dr. F. C. Wilson: I made inquiries as far as I could in the case reported. It seems that the young man lives out in the interior of the State, and that he is under the treatment of a local physician, whose name and address I was unable to obtain; nor could I ascertain where the medicine was dispensed. I did not put the girl on constitutional treatment; simply gave her some calomel to dust upon the sore itself.

B. A. ALLAN, M. D., *Secretary.*

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ACCIDENT INSURANCE COMPANIES VERSUS DOCTORS.

It would seem that the accident insurance companies and casualty companies of this country are organized and working against the interests of the doctors. The premiums paid upon their policies are always sufficient to meet all losses and leave enough in addition to pay handsome dividends. They are not satisfied with this, however; they are constantly trying to take advantage of the physicians who work for them by reducing their bills without even so much as consulting the doctor. Recently a number of cases of this kind have come under our observation. A young physician was employed by a manufacturing firm to look after their injured. He told me that he had recently sent a bill for services which was hardly sufficient to cover car-fare, bandages, and actual time at wage rates, and after some weeks' delay the insurance company had the cheek to send him a check for one third of the amount of the bill. Another friend of our acquaintance presented a bill for services rendered and received a check for less than half the amount of the bill. He, however, returned the check and told them they must have made a mistake

by leaving out some of the figures. This was hint enough, and they very promptly sent a check for the full amount.

The prices paid by these insurance companies are niggardly and mean at best, and the idea of having them deliberately cut the fee which has already been reduced is a thing that no respectable doctor can afford to tolerate. The sooner the profession as a whole realizes that this thing is an imposition, unwarranted in every particular, and refuses to work for these companies at such unjust and unreasonable rates, the better it will be for all concerned.

Current Surgical and Medical Selections.

LOCAL AND REGIONAL ANESTHESIA.—Matas' paper (Philadelphia Medical Journal) is a valuable historical and critical review of the methods of regional anesthesia as employed in surgical practice, including the sub-arachnoid method. He gives full credit to Corning, Halsted, and others as pioneers in the local use of cocain. He describes the methods at length, illustrating the different operations for regional infiltration, etc., and reports cases in his own practice, which has been extensive with these methods. He considers anesthesia with cocain or its allies most often impracticable and unsatisfactory in the following conditions: 1. All operations or manipulations in which complete muscular relaxation is required to accomplish the object of the intervention, as in the reduction of fractures and dislocations of the larger bones and joints—the hip, the shoulder, the elbow, and the knee—in relaxing ankylosed joints, spastic muscular contractures, stretching sphincters of the rectum and bladder, etc. 2. In all extensive atypical operations on the head and trunk in which the neuro-regional method is inapplicable and the field of the operation can not be well defined or circumscribed, as in the radical extirpation of mammary cancer by Halsted's and Meyer's methods; in the extirpation of bilateral and multiple chains of adherent lymphatics in tuberculosis of the neck, etc. 3. In all atypical operations involving prolonged and complicated maneuvers in the splanchnic cavities, especially when the organs operated upon are adherent and inflamed. 4. In all operations upon patients whose emotions are beyond the control of reason or the will, as in the violently insane, in delirious patients, in children, in hysterical and extremely timorous patients, and in all those in whom the mere consciousness of the operative act, without physical pain, is sufficient to produce great mental excitement and distress. In spite of these, he says the number and character of the cases in

which the most rebellious conditions can be brought under the domain of the new technic by a patient, tactful, and skilled operator is astonishing. Spinal cocainization is considered at length, and its advantages and disadvantages discussed. The author's personal experience, begun in 1899, has been limited to nine cases, and shows very little objection to this method. Judging from this, he would limit its indications for application for the present: 1. To adults, and to reasonable persons who have good self-control, thereby excluding children, hysterical patients, and the insane. 2. To patients in whom the methods of local or regional anesthesia are inapplicable. 3. To patients suffering from emphysema, advanced asthma, chronic bronchitis, and other respiratory affections in whom a general inhalation anesthetic is absolutely contraindicated; in advanced cardiac cases with degenerative lesions he would fear the possible depressing effects of the injection and excitement on the circulation. 4. In the majority of cases in which the painful part of the operation is not likely to be prolonged beyond one hour and a half, as he would be averse, in the present state of our knowledge, to repeat a second cocainization or to increase the total dose of the cocain to more than 2 cgm., especially in exhausted subjects. The danger of repeating the intradural injections to prolong the anesthesia is also one of the objections to the use of the method in ordinary labor. But its advantages in instrumental cases, as shown by the successful experiences of Dupaigne, of Louviciennes, France, who, according to Tuffier, first applied the subarachnoid method in labor January, 1900, and of Bumm and Kreis, of Basle; of Doleris and Malartic, of Paris; and of Marx, of New York, can not be doubted, especially in nephritic patients.—*Journal American Medical Association.*

INFARCTS OF THE PLACENTA.—J. Whitridge Williams, in a paper on "The Frequency and Significance of Infarcts of the Placenta based upon the Microscopic Examination of Five Hundred Placentæ," gives the result of a thorough study of the subject, illustrated by a series of fine plates. His conclusions are as follows: (1) Infarcts measuring at least 1 cm. in diameter were observed in 315 out of 500 consecutive placentas (63 per cent). (2) Smaller infarcts, many just visible to the naked eye, were observed in the great majority of placentas, while microscopic examination revealed early stages of infarct formation in every full-term placenta which he examined. (3) The primary cause of infarct formation in the great majority of cases is to be found in an endarteritis of the vessels of the chorionic villi. (4) The primary result of the endarteritis is coagulation necrosis of portions of the villi just beneath the syncytium, with subsequent formation of canalized fibrin (as the process becomes more marked the syncytium likewise degenerates and is converted into canalized fibrin, which is followed by coagulation of the blood in the intervillous spaces, which results in a matting together of larger or smaller groups of villi by masses of fibrin). (5) The part played by the decidua in the production of infarcts has been

greatly overestimated by many observers; it is more than probable, in many cases at least, that the tissue which they designate as decidual is really fetal ectoderm. (6) Moderate degrees of infarct formation are not pathologic, and exert no influence upon the mother fetus, and are to be regarded as a sign of senility of the placenta, analogous to the changes which take place in the villi of the chorion at an earlier period. (7) Marked infarct formation is not infrequently observed, and often results in the death or imperfect development of the fetus. It is usually associated with albuminuria on the part of the mother, though at present we can not account satisfactorily for the relationship between them. (8) Infarct formation is not particularly marked in cases of eclampsia, being usually observed only in those cases which were preceded by marked albuminuric symptoms. (9) There is no evidence in favor of the bacterial origin of infarcts.—*Philadelphia Medical Journal*.

EFFECT OF MENSTRUATION ON THE STATE OF THE STOMACH.—A light flow finds no expression in the condition of the stomach. More abundant bleeding leads to hyperchlorrhidia, either by reflex action or by direct extension of the menstrual congestion to the region of the stomach. The occurrence of hyperchlorrhidia is conditioned on the excitability of the central nervous system. In cases of great loss of blood, as in menorrhagia, a lessening of secretion with a reduction of the acidity may take place. The determination of the state of the stomach by passing the tube after a test breakfast given during the menstrual period is unreliable, because the increase of acidity may lead to a false diagnosis of hyperacidity on the one hand or conceal a loss of acidity on the other. In a similar way the reduction of acidity in case of menorrhagia might lead to an incorrect diagnosis of asthenic gastritis.—*Elsner Archiv. f. Verdauenskrankheiten*.

CONTRIBUTION TO THE KNOWLEDGE OF THE ETIOLOGY OF SYPHILIS.—Max Schuller (*Centralb. f. Bakt. u. Parasit*) has also found in syphilis a micro-organism of probably protozoan nature, present in the hard chancre, the secondary and tertiary lesions of the disease, and especially in the hereditary form of the disease. In hard chancres kept in alcohol he was able to find, by one thousand times magnification, exceptionally small oval vesicular bodies arranged in rows. They had double contoured glittering capsules and brownish or brown-yellowish, sometimes darker, contents. In teased and stained preparations larger free bodies were observed. Their appearance and finer structure recall those found by S. in the tumors, though they are obviously different. In addition, by treating sections with iodid of potassium and examining them under a high power, he was able to demonstrate fine zig-zag or spiral passages passing directly from the surface of the chancre in an oblique or transverse direction to tubes or pockets in the deeper part of the inflammatory infiltrated tissue. These were filled with peculiar "shot like" round or conical dark-brown or violet

bodies, in which by appropriate transmitted light doubly contoured vesicles are visible. These parasites were found in all of the tissues examined, and were present in the blood of the spleen of a case of fatal florid syphilis. The presence of the bodies is as constant and of as great diagnostic value as the presence of the tubercle bacillus in tuberculosis, in Schuller's opinion. The experimental cultivation of the organisms was attempted similarly to the method described for the microparasite of carcinoma.—*International Medical Magazine.*

EYE DISEASES COMPLICATING TYPHOID FEVER.—Dr. Schwienitz (Philadelphia Medical Journal) discusses this interesting subject. He says there are no ocular lesions characteristic of typhoid fever, nevertheless a number of diseases of the eye may accompany or follow it. In the following list they are arranged in the order of relative frequency:

1. Affections of the conjunctiva and cornea.
 2. Affections of the retina and retinal vessels.
 3. Affections of the ureal tract, namely, iris, ciliary body, choroid, and of the vitreous humor.
 4. Affections of the crystalline lens.
 5. Affections of the muscles (intra- and extra-ocular).
 6. Affections of the optic nerve.
 7. Affections of the orbit.
1. Under this we may have conjunctivitis and ulcer of the cornea.
 2. Here we may have retinal hemorrhage, anesthesia of the retina.
 3. Under this may be seen iritis or iridocyclitis choroiditis.
 4. Cataract is sometimes caused by typhoid fever.
 5. This group may show optic neuritis (which rarely is retro-bulbar), optic atrophy. The optic atrophy may be caused by the antecedent neuritis, by excessive hemorrhage (intestinal, nasal, or menstrual), or by the injudicious use of quinine.
 6. Here the intra-ocular muscles may be affected, causing paresis of accommodation. If the extra-ocular muscles are affected, we may have strabismus of various kinds. Some of these paralyses, especially in children, have been considered as due to the basilar meningitis which is supposed to accompany some cases, but they may also be explained by an intense effect of the poison on the nervous system without the production of inflammation.
 7. Affections of the orbit and its vessels are very rare. There have been noticed thrombosis of the orbital veins, orbital cellulitis, orbital hemorrhage. In the treatment of these various affections the general principles of ocular therapeutics must be applied, bearing in mind, of course, the extremely depressing influence of the fever under discussion.—*Canadian Practitioner and Review.*

Special Notices.

WM. GEDDES, M. D., 1720 14th St., Washington, D. C., says: Aletris Cordial has proven in a case of dysmenorrhea of some years' standing, wonderfully efficacious, and has apparently given to the sufferer complete relief. This being the first case in which I have had occasion to try the Aletris Cordial, and sufficient time having elapsed for me to speak of the permanence of the cure, I can say that I propose to continue the use of Aletris Cordial in all such cases, and wherever a uterine tonic is indicated.

MAKE A NOTE OF THIS.—It is a matter of common observation that many cases of bronchitis will persist in spite of the continued, varied, and judicious use of expectorants. "The cough," says one prominent physician, "hangs on, harasses the patient with its frequency and severity, and is exceedingly liable to recur every winter—to become a regular 'winter cough'—with its sequelæ of emphysema, asthma, and, ultimately, dilatation of the right heart."

Dr. Milner Fothergill, of London, insisted that cough of this character is due to lack of tone, not only in the general system but in the blood-vessels of the bronchioles. This authority demonstrated that the only successful method of treating this form of cough is by means of appropriate systemic and vascular tonic medication. It is particularly in this class of cases that Gray's Glycerine Tonic Comp. has gained a most enviable reputation. This remedy, which is a most palatable and agreeable one, not only has a selective tonic and anti-phlogistic action upon the respiratory mucous membrane, but it removes the ever-present element of systemic depression. The beneficial effects of Gray's Glycerine Tonic Comp., even in rebellious cases, are invariable and most pronounced.

THE PURDUE FREDERICK CO.

No. 15 Murray St., New York.

THERAPEUTIC EFFICACY OF HEROIN.—Dr. Max Einhorn (Philadelphia Medical Journal, British Medical Journal, November 25, 1899) has used heroin since January 1, 1899, either in powder form or tablets, or heroin hydrochloride in solutions, giving 6 mg. ($\frac{1}{12}$ gr.) twice daily. The formula prescribed was heroin, 0.005; sach. alb., 0.3; ft. pulv., No. xiv; sig: one powder twice daily. Or: heroin mur., 0.075; aq. dest., 60.0; sig: one teaspoonful twice daily. In three out of four cases of pulmonary tuberculosis a constant improvement (alleviation of the cough) was obtained, while in one case, after acting beneficially at first, the drug lost its effect in fourteen days. In five out of seven cases of asthma its action was good; it diminished the dyspnea and alleviated the cough, although in two of them the administration of potassium iodide in conjunction with the heroin was necessary. In two other cases no improvement was apparently obtained. In two cases of chronic bronchitis improvement occurred in one instance, and no results in the other. In three cases of cardiac lesion and slight dyspnea amelioration occurred in two, while in a third no effect was noted. In two cases of cancer (one of the cardia and one of the stomach) the pains were greatly alleviated. In a case of hyperesthesia of the stomach and chronic bronchitis the remedy acted well, but produced constipation; and in two cases of gastralgia (one from duodenal ulcer, the other from gastric catarrh), decided amelioration took place. In a case of tabes dorsalis the existing gastralgia and enteralgia were much relieved. Dr. Einhorn concludes, from his observations, that in heroin we possess a very valuable therapeutic agent. It principally allays coughs and eases respiration, but it has also general analgesic properties, which render it of benefit in most painful affections. Except slight dizziness and occasionally dryness in the throat, which he noted but rarely, he has never seen any unpleasant symptoms even from a prolonged use of heroin.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

ARTHRITIS DEFORMANS AND ITS RELATION TO SOME DISEASES DUE TO PERVERTED METABOLISM.*

BY JOSEPH W. IRWIN, M. D.

*Professor of Neurology, Practice of Medicine, and Clinical Medicine in the Kentucky
School of Medicine, etc.*

A lady, aged thirty-eight, the subject of a neuropathic inheritance, came to my notice three years ago suffering from a combination of infirmities. Two years previously one of her knees had become ankylosed by reason of an attack of arthritis deformans, and she gave the usual history of having had swollen joints; the small joints were diseased at first, chiefly those of the lower extremities.

She was anemic, despondent, and quite nervous, which was in part due to a long confinement in New York, where the surgeon in charge had kept the diseased knee in a plaster cast for several months, apparently in the hope of preventing the inevitable deformity which I found existing.

She complained of pain in all her joints and stiffness on attempting to walk. She had had a few attacks of what her physician said was gastric neuralgia. The menopause not being far off, it was thought by him that some connection existed between the neuralgia of the stomach and the phenomena attending the evidence of change of life.

She had been having extensive hemorrhages from the uterus, amounting to menorrhagia, every month for several months past, and the anemic condition was increasing; there was also some irregularity

* Read before the Louisville Clinical Society.

in the menstrual periods. For many years (and perhaps from the time of puberty) she had complained of headaches, which had grown gradually worse, and since she had passed her thirtieth year of life they had assumed more of the character of migraine than of the ordinary headache.

Now that she had become more anemic, more nervous, and her strength was failing, the attacks of migraine were more severe, and they occurred every two weeks or every month; but, as a rule, the attack attending the menstrual discharge was the most pronounced. She had attacks of bilious vomiting also, and suffered greatly from a feeling of weakness. She had not lost much flesh, for in the intervals of relief her appetite and digestion were fairly good. She weighed about 160 pounds.

Soon after coming under my observation she had an attack of pain in the gastric region, the pain extending around her waist to the right side, up to the right shoulder, and down to the right iliac fossa. She was of an ashen-gray color, with cold perspiration broken out around the roots of her hair and on her neck and extremities; respiration was quickened and attended by moaning; there was also considerable nausea.

At irregular intervals afterward she suffered from similar attacks, some even more severe than the first. The menorrhagia became more troublesome, and just preceding or one week following the menstrual period the spells of gastric pain usually appeared.

The advice of an Eastern specialist was sought, who, after repeated investigations, found that the cause of the hemorrhages was a small tumor imbedded in the wall of the body of the uterus, and he gave the opinion that the attacks of gastric pain were probably the result of a reflex. The case remained under his care for about one year, and progressed from bad to worse, until she had become almost exhausted. Her weight had diminished until she had lost fifty or sixty pounds or more. The attacks of gastric pain still persisted, and so did the migraine, growing worse steadily.

Some doubts as to the diagnosis of the specialist led to a consultation, which resulted in the opinion that the gastric pain was caused by the passage of gall-stones, and that the hemorrhages, which were exhausting the vitality of the patient, were due to a tumor, as diagnosed previously. A surgical operation was immediately done; all the womb down to the neck and the ovaries were removed, with the

result of finding a small myoma in the anterior wall of the body of the uterus.

The investigation was extended to the gall-bladder. The surgeon having inserted his hand into the abdominal cavity through the opening below, felt a gall-stone lodged at the entrance of the cystic duct. An incision was made over the region of the gall-bladder and the concretion removed. The wounds healed slowly and the hemorrhages and attacks of gastric colic ceased, but the constitutional disorder seemed to operate with renewed energy. The attacks of migraine became, if any thing, more severe, and occurred more frequently; the affection of the small joints, that for a time had in a measure subsided, returned; the metacarpo-phalangeal joints, the wrists and elbows began to suffer. The swellings were more of the inflammatory kind, and very painful. Now and then she complained of severe pain in the cervical region of the spine, and from time to time severe sub-sternal pain. There was some swelling in those parts. The right knee-joint, which was partially ankylosed, became again the seat of inflammation, as was the left knee. The swelling was unattended by discoloration, but much hyperesthesia was present.

The attacks of migraine occurred sometimes as often as twice a week, lasting two or three days, and they were attended by persistent bilious vomiting. Notwithstanding the fact that the ovaries and uterus had been entirely removed, evidence of periodical menstrual disturbance was announced by the usual severe attack of migraine.

That there was some connection, nervous or otherwise, between the menstrual periods, the migraine, and the affection of the joints was shown by the fact that within a few hours after the periodical disturbance became apparent all pains and swellings in and about the joints, except Haygarth's nodosities and Heberden's nodes, rapidly disappeared; the joints became supple and the movements were no longer painful during the prevalence of the periodical disturbance. The relief to the joints lasted from two to four days; then the swelling and pain recurred with renewed force.

There is much evidence tending to show that arthritis deformans is primarily of nervous origin, and this case tends to confirm this view. Furthermore, I believe that an analysis of the pathological anatomy of arthritis deformans, of gout, of lithemia, and of rheumatism will show to a reasonable certainty that the change of metabolism which gives rise to the various phenomena in those diseases is always preceded by derangement in the function of the nervous system.

Let us compare the principal points of the pathological anatomy of those diseases: In gout there are destructive changes in and about the joints; fibrous and serous tissues, anemia, and the blood is charged with fibrinogen and bi-urate of soda.

In lithemia there are changes in the synovial and serous membranes, the blood is less alkaline, and there is arterio-sclerosis, cardiac and renal sclerosis, and vascular hepatic sclerosis and anemia. In arthritis deformans there are destructive changes in the joints, Haygarth's nodosities, and sometimes eburnation, destruction of the synovial membranes, and chalky deposits. There is anemia and an excess of fibrin in the blood. In rheumatism there are destructive changes in and about the joints, fibrous and serous tissues—floculi in the synovial fluid and an excess of fibrin in the blood.

These are the principal anatomical changes found in those diseases, and when we come to analyze them closely we are unable to discover any great discrepancy that might point out a well-defined difference in the metabolism. If from a dozen or more such cases as the foregoing, which I have seen, a final conclusion could be reached, there would be no more proof wanting to establish the common origin of arthritis deformans, of gout, of lithemia, and of rheumatism.

When we come to think of the character of the forces which are at work in the nervous system and how little we know of their real nature, the mind is forced to turn away from this trend of thought and leave to the visual sense the duty of observing results, from which alone we can logically draw deductions.

The changes in normal metabolism which are present in those diseases must surely be preceded by certain disturbances in the nerve force, and as we can judge from results only, we are prepared to believe that the phenomena of arthritis deformans with its exudates, nodes, and nodosities, and destructive changes in and about the joints, does not differ materially from the pathological phenomena of gout, of lithemia, and of rheumatism.

In all cases we find that the joints are involved, the synovial membrane, the fibrous membrane, and the serous membrane are involved, and, too, there is anemia, though not so pronounced as it is observed in rheumatism. There is an increase of fibrin and fibrinogen in the blood, and there are sclerotic changes in the various organs of the body, notably the blood-vessels, the heart, the liver, and the kidneys.

Whether the morbid matter may have been the result of bacterial infection as in rheumatism, or of excessive eating as in gout and lithemia, or of diminished vitality as in arthritis deformans, in the one case overcrowding the system with nutrition and thus preventing normal metabolism, in the other case suspending the powers of metabolism by reason of a diminished vitality, it matters little; for it is reasonable to expect that no constant anatomical changes may be observed in the tissues where nervous phenomena are the ruling cause, any more than to expect constant phenomena in an attack of hysteria or nerve storm.

It would seem reasonable, therefore, to believe that the waste products retained in the system might vary in composition to some extent, and at the same time be due to a common cause.

Before considering the treatment of diseases, the principal phenomena of which are waste products that have been retained by reason of abnormal function, the etiology and pathologic anatomy should be borne in mind. Preceding all anatomical changes of structure, a neuropathic inheritance or some form of neurosis appears.

In gout and lithemia overeating and the use of improper articles of food are etiological factors. In rheumatism the ravages of bacteria or the retention of noxious products resulting from hardships, including the vicissitudes of season, are prime causes. Lastly, the etiology of arthritis deformans points to a wasted vitality, due to hemorrhage or excessive care.

Then let us review some of the pathologic changes found in those diseases, in and about the joints, in the fibrous and serous tissues, and in the various organs and other parts of the body, and we have the physical clinical features of abnormal metabolism. Suboxidation seems to take a prominent part in the pathologic formations.

It is not my purpose to consider the diet most suitable, or review the various remedies which have been employed for the cure of the foregoing disorders. I shall allude briefly only to the restoration of nerve force by the healing powers of mineral waters and pure air.

There are many resorts for such invalids in this country where more or less relief has been obtained. No doubt, in many instances, the relief has come from rest of mind and body more than from the use of the vaunted waters. An ideal resort would be one of uniform temperature at an altitude of from 2,000 to 3,000 feet above the sea level, to which could be added the healing powers of solvent mineral waters

capable of dissolving and eliminating the retained products of a defective metabolism of cells and tissues.

Hot Springs, situated in Bath County, Virginia, near the main line of the C. & O. R. R., is such a resort. It is a place of rest for the afflicted of mind or body. Surrounded by mountains whose summits reach far above the clouds of blue mist that sometimes obscure the view, nature has bestowed her richest gifts upon the environments, and man has done his full part to bring into use the pure air and healing waters. In the use of those thermal waters in that balmy atmosphere without germ or mote, beneath the mists and in the shadows of those verdant mountains, tired nature will find its truest remedy for the renewal of life's forces.

LOUISVILLE.

LUPUS VULGARIS.*

BY JOHN EDWIN HAYS, M. D.

Professor of Dermatology, etc., in the Hospital College of Medicine, Louisville, Ky.

Statistics indicate that lupus vulgaris is comparatively a rare disease. It is one, however, to which much interest attaches, in view of its stubborn and rebellious nature, the great disfigurement which so often attends its progress, and in presenting features which disclose its identity as one of the forms of tuberculosis.

The essential etiological factor in lupus vulgaris is the tubercle bacillus. Friedlander was the first to demonstrate the presence of this organism, and to prove by crucial tests its tubercular character. Lupus vulgaris may therefore be defined as a chronic inflammatory disease of the skin, tubercular in its nature, and characterized by the development of small elevated nodules in the corium, which tend to enlarge, coalesce, and spread, usually proceeding to ulceration. Once started, this ulceration usually continues until horrible disfigurement results from tissue loss.

The disease may attack any part of the integument, but usually occurs on the uncovered portions, as the hands and face, especially the latter. The favorite point of attack on the face is the nose and the neighboring part of the cheek. The mucous membrane of the cheek, palate, pharynx, and larynx may be attacked, but, as a rule, not primarily, this condition succeeding an involvement of the skin.

* Read before the Louisville Medico-Chirurgical Society, March 29, 1901. For discussion see page 346.

The distinctive lesion in a patch of lupus vulgaris is a small nodule. This lupus nodule is about the size of a pin's head, is brownish-red in color and somewhat soft in consistency, and, as Hutchinson first pointed out, resembles apple jelly in its appearance. The tubercle bacilli are imbedded in these little neoplastic growths. They are scanty in number, and frequently very difficult to find.

As yet very little is positively known in what way the bacillus gains access to the corium. While it is very probable in the majority of cases that it enters through an abrasion in the epidermis, it may, however, be carried into the body through some of the natural channels, and be conveyed to the skin through the blood or lymph current.

The initial lesion is a single, or, as a rule, several reddish-brown papules, which may occupy a level with the skin, depressed below or slightly elevated above it. These papules eventually coalesce to form a patch, which is soon converted into an ulcerating surface. The progress of the disease is very slow, and absence of pain one of its distinguishing features.

Lupus vulgaris is a disease of early life, the great majority of cases beginning before the age of twenty years. It is said to be met with more in the female sex. It is a disease which frequently leads to a very great destruction of tissue before its termination.

As regards prognosis, it may be stated that in many cases it is possible to check the disease, but, unfortunately, a recurrence is very likely to take place. When complications exist, as, for instance, the presence of tubercles in other organs, they must be taken into account in forecasting the issue of the disease.

In a large proportion of cases the diagnosis of lupus vulgaris presents no difficulty, the appearance of the lesions being amply sufficient to identify the nature of the trouble. In obscure cases, however, one must have recourse to a process of exclusion. The presence of the bacillus would, of course, be conclusive, but it must be admitted that its discovery, when present in the lesions, is not always easy, even to an expert.

Syphilis and epithelioma are the two conditions which most closely resemble lupus vulgaris. Syphilitic lesions may be eliminated by the history of the case, traces of disease elsewhere in the body, by a much more rapid destruction of tissue, and in otherwise doubtful cases by their behavior to antisiphilic measures. Malignant growths occur later in life, run a more rapid course, are more painful and more likely to implicate the neighboring lymphatic glands.

It may be interesting to mention in this paper a case of lupus vulgaris which is now under my care. The patient is a young man, nineteen years of age, slender in form but possessing fairly good general health. The disease began in May, 1900. The integument of the upper lip a little to the left of the median line was first involved; then the disease slowly crept toward the nose. When he came to me last November the disease had gone beyond the lip, and had invaded the cartilaginous septum and the left ala.

The margin of the advancing disease showed the characteristic nodules of lupus. No hereditary history of tubercle was obtainable. The trouble had been slowly progressing since its commencement; the treatment up to this time had not been successful in arresting its march. He had been given large doses of iodid of potassium, under the supposition that he was suffering from syphilis.

Several remedies were employed locally in this case, but the treatment which did most good was an application of a paste of salicylic acid and creosote. In the course of a few weeks' treatment he was so nearly cured that I allowed him to return to his home in an adjoining State. The destructive process was apparently checked, except possibly at a small spot on left ala, the former ulcerating surface of lip and nose being replaced by smooth scar tissue.

He returned to me about one month ago, having had a slight recurrence in the nose and also an outbreak of the disease in the mouth, involving the hard palate and gums. The lesions are again disappearing under treatment, and I hope to complete the cure in a short time. The disfigurement of the nose which has resulted in this case differs very much from that which usually occurs when this organ is invaded by syphilis. The sunken-in appearance so characteristic of the deformity occasioned by syphilis, and caused by a destruction of the bony frame-work of the nose, is entirely wanting in this case.

The general or internal treatment of lupus vulgaris is that which is proper for all forms of tuberculosis, namely, the use of remedies with a view to improve the general bodily health. Local treatment, to be successful, must have for its purpose the entire removal or destruction of the tubercle bacilli found in the diseased areas. To accomplish this end the following methods are to be employed: Excision by the knife, the galvano- and thermo-cautery, and the various caustic pastes. It becomes a matter of interesting inquiry which of the well-recognized methods to choose in managing these cases. My own experience is too

limited to pronounce any very decided opinion as to their comparative merits. It is my judgment, however, that if the method so selected is the one best adapted to the particular case, and is skillfully and judiciously carried out, the chances are very good for a successful result.

In a limited number of cases of lupus, satisfactory results have been obtained by the employment of the Röntgen rays; thin plates of lead are used to protect the healthy skin surrounding the patch. While pursuing this treatment accidents are liable to occur, such as a violent dermatitis, followed by extensive sloughing. I am strongly inclined to look upon these rays as an uncertain measure, productive of possible good and probable harm, and should only be employed by a careful operator in cases which have stubbornly resisted other less dangerous methods.

In some cases the improvement in lupus has been rapid and striking under the use of Koch's or Maragliano's serum, but very few complete cures have been reported from their use.

LOUISVILLE.

ARSENAURO IN THE TREATMENT OF SOME NERVE DISEASES, WITH REPORT OF CASES.*

BY J. J. WAKEFIELD, M. D.

My attention was first called to arsenauero about a year and a half ago as a cure for diabetes mellitus. At that time I had under treatment a young lady, nineteen years of age, who had the disease in its aggravated form. It was a case of catching at straws with me, for, notwithstanding the usual remedies, medicines, diet, etc., had been tried, she had lost steadily in strength, and the result, I feared, would be the usual one in the young—an early death. She was put upon the arsenauero, beginning with five drops the first day and one drop added to each dose daily until the full effects were obtained, but to no purpose, as she went into coma and died a few days after she had reached the point of saturation, at which time she was taking fifty drops three times a day. If an earlier diagnosis had been made and the arsenauero used sooner, the result might have been different. This is only an opinion, however, suggested by literature that reports cases cured.

* Read before the Brashear Medical Society, at Springfield, Ky., April 16, 1901.

CASE 2. S. M., age eleven; a girl, white; came under my care April 15, 1900, for treatment of chorea. Family history negative. The mother had noticed for several weeks peculiar movements, but attached no especial importance to them until the child began to grow irritable and restless in sleep. She was anemic, with poor appetite. Arsenauero was given, beginning with five drops in half a glass of water after meals, and one drop added to daily dose thereafter. There was no improvement in the condition of the child for some time; in fact, the symptoms grew more aggravated during the first three or four weeks of treatment. The first improvement noticed was when she had gotten up to thirty-eight or forty drops thrice daily. At that time it was manifest; appetite was good, was sleeping well and gaining flesh, and choreic movements decidedly better. The treatment was kept up in increasing doses until she had reached sixty drops thrice daily, when the improvement was so decided it was not thought necessary to go on to intolerance. The dose was reduced to twenty-five drops three times daily and kept up for several weeks. The cure was complete, as there has been no return of the trouble.

CASE 3. E. S., aged nine; a girl, white; came under my care last June for treatment of chorea. Family history good. This case was well marked, though not nearly so bad as the one just cited. The child was given the arsenauero as in the above case, but no improvement was observed until saturation was reached, at which time she was getting forty-five drops three times daily. The improvement was now apparent, and after withdrawing the medicine for forty-eight hours the dose was reduced to twenty-five or thirty drops thrice daily and kept up for several weeks longer and then discontinued, as the cure seemed to be complete. There has been no return of the trouble.

CASE 4. S. J., aged thirteen; girl, white; seen February 1st last. Family history not good on the maternal side; the mother and two or three of her family had at times had some nervous trouble. This is also a case of chorea. The child had been having some peculiar muscular movements for several weeks, according to the mother's statement, and was growing worse all the time. The patient was anemic, with poor appetite, slept badly, and was extremely irritable. She was given the arsenauero, and the dose increased daily as in the two other cases above mentioned. The symptoms increased in severity for a month, until it became the most distressing case I have ever seen. She was unable to walk or sit up without assistance; deglutition was at

times impossible; she complained of a severe pain at times over the region of the heart, which organ was irregular in action. The symptoms were so bad the child was isolated and rigidly confined to bed for eight or ten days. There were no signs of improvement until she had gotten up to forty drops three times a day, when it was noticed. The appetite was now returning and the choreic movements much better. The arsenauro was pushed to saturation, which was reached on the sixth day of this month, it being the sixty-fifth day of treatment, or seventy drops three times a day. The medicine was stopped for forty-eight hours, the dose reduced to thirty drops three times a day. This will be kept up as long as there are any symptoms of the trouble, but as she is steadily showing improvement, I confidently expect, in a short time, to see her entirely well.

CASE 5. Mr. S. M., aged sixty-three; consulted me last June for immoderate flow of urine and nervous debility. He refused to furnish a specimen of urine for analysis, saying if he had diabetes he would rather not know it. He, however, measured the urine, and was passing approximately nine pints in the twenty-four hours. His appetite was capricious; had lost flesh gradually for the past year, or ever since he noticed that he was passing more than the usual amount of water. He was put on the arsenauro, five drops three times a day, and one drop added to the dose daily thereafter. When he had reached forty drops thrice daily the improvement was quite manifest, as evidenced by increased strength, weight, appetite, and also in the amount of urine voided in twenty-four hours, which was reduced to less than one half. The dose was not increased, but kept up for several weeks longer. His improvement seems to have been permanent, as I have heard no further complaint.

CASE 6. Mr. J. S., aged sixty-five, white; had been under my care for ten months with locomotor ataxia. The case, while not a severe one, was characteristic. He had lightning pains in the lower extremities, and experienced great discomfort from girdle sensation. Various tonics, together with iodide of potash, had been tried up to that time (July, 1900) with only partial relief. He had lost flesh steadily, and was growing more debilitated all the time. I decided to give him arsenauro in ascending doses; by the time he had gotten up to forty-five or fifty drops three times a day improvement was noticed. The gait had improved, the girdle sensation and pains in limbs were felt only slightly at times; his appetite was good, and he had gained

strength. The arsenauero was not increased, but reduced to twenty-five or thirty drops three times daily, and kept up for some weeks longer. The case has not been progressive, though it has been several months since the medicine was discontinued. I am satisfied the improvement was due to the tonic effects of the arsenauero on the spinal cord.

The results obtained in the cases herein reported, as well as in some other conditions in which it has been tried, convince me that we have in arsenauero a blood and nerve builder of great power, and a valuable addition to the physician's armamentarium.

BLOOMFIELD, KY.

SALPINGO-OOPHORECTOMY FOR DYSMENORRHEA AND NEURASTHENIA OF OVARIAN ORIGIN.*

BY J. T. GREEN, M. D.

The patient whose case I wish to bring to your attention is a woman, thirty-nine years of age, the mother of three healthy children; no miscarriages; has had reasonable health until the last four or five years. She began to have some menstrual disturbance, followed by profuse hemorrhage, which exsanguinated her. She sought my advice, and, after making a careful examination in one of these abortive attacks, I found the uterus congested, os thick and slightly everted, ulcerated, and irritable. I then believed that her dysmenorrhea was of uterine origin, and advised curettage and treatment for the ulcerated condition, which was done, and after a month's treatment the womb was in a good condition. She then menstruated regularly for six months, though attended with considerable pain in ovarian region, severe headache, and vomiting, from which she could get but little relief. She was now becoming melancholy, with despondent forebodings, and a fixed idea of some pelvic trouble from which she could never recover.

Her husband, fearing she would do something desperate, consulted me again. I assured him that I had done all that I could do in the way of medicine, and I proposed the removal of the ovaries to establish the menopause; I believed it would be effective in relieving her mind, if not relieving a great deal of pain concomitant with ovulation. I had then

*Read at a meeting of Muldraugh Hill Medical Society, Elizabethtown, Ky., April 11, 1901.

abandoned the idea that the trouble was of uterine origin, but rather ovarian in origin.

I believed that disease of the ovaries existed, brought about by a uric acid deposit in them much the same as in other tissues, and that dysmenorrhea and attendant symptoms were due to uric acid sclerosis. I believe it is admitted by authority no less prominent than Dr. Haig, of London, that uric acid really dominates the function of nutrition and structure of the human body to an extent that has never yet been dreamed of in our philosophy, and in place of affecting the structures of a few comparatively insignificant fibrous tissues in which it is found after death, it may really direct the development of the life history and final decay and dissolution of every tissue from the most important nerve centers and most active glands to the matrix of the nails and the structures of the skin and hair, and is believed by some as a most potent factor in producing nephritis by an arterio-sclerotic process, and also the factor in producing vertigo, insomnia, nervousness, tinnitus aurium, neuralgia, paresthenia, muscular cramps and twitching, and all vasomotor disturbances, also delusional mental conditions, hysteria, neurasthenia, epilepsy, and disseminated sclerosis.

Now, with a poison circulating in the blood so baneful in its effects, might we not with a reasonable degree of certainty believe that the ovaries may be the glands upon which the force and ravages of this poison may be exerted and produce an ovarian lesion and the various reflex neuroses mentioned above? Now, we have a telegraphic office within the pelvis, from which physiological and pathological messages are sent out or received, and since many of the pelvic lesions send out the same message, it is difficult in the extreme to define the condition present at all times. We find certain women who are nerve counterfeits from uterine and ovarian disease, and others whose complaint is functional, that is, constitutional, and center around her genitalia, and the various organs of which present no manifestations of disease. These cases are to be carefully differentiated, for one is surgical and the other medical.

Now, how are we to find the relationship of cause and effect between these pelvic lesions and these constitutional states? We take first the history of these cases, and consider the events in their order; they may be easily traced, and if they are not easily traced, a knowledge of physiological and pathological laws will enable us to draw reasonable deductions, and will afford us a key to the solution of the problem. We

take as the expression of the physiological the constitutional disturbance of puberty, the menopause, and sexual excitement; these states may be normal or abnormal, but you have all noticed, no doubt, the constitutional derangement which resembles so closely the morbid phenomena of nerve change or exhaustion.

Now, we can see the real cause for the constitutional trouble in each case, to wit: The evolution of puberty, the involution of the menopause, and the sexual excitement, all of them manifesting their constitutional effects. Now, if this is physiologically true, might it not be pathologically true that pelvic lesions would give equally pronounced constitutional disturbance? the difference in effect being due to the cause, and both of which are local. Now, it is evident that if these nervous perturbations extend beyond the normal limit, that metabolism will be correspondingly disturbed. The equilibrium of repair and waste can not be maintained, and hence the abnormal increase of waste material and the development of various poisons in the blood, and one of the most potent for harm is uric acid. This poison is thrown off by the lungs, skin, bowels, kidneys, and ovaries, and it may be precipitated in any of these organs, and then begins the multiplication of difficulties. The lithemic, neurasthenic condition becomes greatly exaggerated, the poisons of the uric acid increase in the blood, which has the effect of still lowering the nervous tone, especially upon the sympathetic nervous system, evidenced by more or less dilatation of the pupils and lessened peristalsis, constipation, disturbance of digestion, and atheromatous degeneration of the blood-vessels by obstructing the vasa vasorum. Now, it is evident that ovarian diseases, even though functional in the beginning, may become organic in the end; from these poisons and through the rich nerve supply already mentioned, any of the neurasthenic symptoms from atonic indigestion and simple headache to insanity is possible.

Now, I will recapitulate with an epitome of my case: Mrs. B., thirty-nine years old, married to her second husband, mother of three healthy children; no miscarriages, no history of specific disease or puerperal infection, but for a number of years previous to this menstrual trouble she had been a sufferer from indigestion, constipation, irregular action of kidneys and headaches. As these troubles progressively grew worse she began to suffer more and more at each monthly period, pain in the ovarian region, and an uncontrollable headache preceding the flow several days. As the flow came on the headache continued

with vomiting acid and bilious matters, and with this a slight fever and a marked erythema of the face and neck, pains shifting through the body; the menstrual flow became profuse and difficult to control.

She became nervous, irritable, and excitable, and relapsed into a melancholy mood, from which she would scarcely emerge from one period to another; her imaginations became morbid, and she looked upon them as being real and acted accordingly (which is a mild degree of insanity); and, by the way, the paramount difference between the sane and insane consists in the importance placed upon these imaginations.

This woman became importunate. Now, what must be done? All other means exhausted, I determined to try what virtues there were in a surgical operation, notwithstanding the opposition of Dr. Kelly, of Baltimore, when he says he accepts with great hesitation the indications of an ovariectomy for painful menstruation, together with the declaration that in five hundred pelvic operations he has operated for this condition alone only four times with only one complete success. At her age fecundation could hardly be considered, and the moral effects of being unsexed could hardly be urged. There remains only the importance of the internal secretion of the ovaries, which Dr. Kelly so much desires to preserve for the vitalizing influence upon the blood and nervous system. It will be seen from what has already been said that the bad influences of these nervous reflexes, undoubtedly of ovarian origin, will in all probability more than counteract the good effects of the ovarian secretion. The results of the operation has verified this conclusion. This woman was prepared in the usual way for abdominal section.

With the efficient help of Drs. W. S. Clark and W. A. Conklin, of Leitchfield, these ovaries and tubes were removed, after making an incision three and a half inches long in the abdomen; no adhesions were found; the tubes, as you will see, especially the right tube and ovary, are rather hard and the ovary atrophied, the tube kinked and unusually short, due possibly to the sclerotic process going on in them. The pulsation in the right ovarian artery was not so vigorous as in the left, and besides there was a dilated, varicose condition of the right pampiniform plexus; this is still evident at the hilum of the ovary. The left tube is more patulous, but has upon it, as you see, two small pearly vesicles, which are probably due to a subacute inflammation. The left ovary is somewhat enlarged, containing a binocular cyst, which

was filled with a straw-colored sticky serum. These are the macroscopic appearances. The ovarian and uterine vessels were ligated separately, with a ligature en masse of the proximal tube for additional security, the stumps cauterized with pure carbolic acid and returned into the abdomen.

The peritoneum, fasciæ, muscles, and skin were united separately with a continuous suture, the skin united with a subcuticular stitch. She was placed in bed at twelve o'clock, and inhalation of vinegar given to counteract the effects of the chloroform and to lessen vomiting, but she vomited almost the entire night following, after which she pursued an even course, with scarcely an untoward symptom. Her temperature at the time of the operation was 99° F.; it oscillated between this and 100.5° F. for six days, after which it dropped to normal; the wound healed by first intention.

The recovery was uneventful. She has since remained free from all those harassing symptoms dependent upon ovulation, menstruation, and resulting nervous perturbations, though she has an occasional headache, with wandering pains through the body; urine, sp. gr. 1025 (1040 at the time of the operation), color not so high, and voids 2½ pints in twenty-four hours; no albumen or sugar. She has been without treatment since the operation—September, 1900.

LITCHFIELD, KY.

THE ELECTRO-MAGNET IN OPHTHALMIC SURGERY.*

BY DR. YATARO OTA, OF JAPAN.

Nothing certain is known concerning the first professional use of the electro-magnet in the treatment of the eye. About two hundred and fifty years ago, that is to say, in 1654, Fabricius Hildanus is reported to have removed a piece of iron that had pierced the cornea, using for this purpose some kind of a magnet. This is the first recorded operation of its kind.

In 1842 we read that Dr. Mayer extracted a piece of iron from the eye of one of his patients by means of a magnet that had a lifting power of thirty pounds, and at the same time Dr. Himley also succeeded in removing a piece of iron which had found lodgment in the eye. In

*Translated by the Rev. Nicholas Ward, C. P., SS. Giovanni e Paolo, Monte Celio Roma, Sud., Italia.

all these cases a forceps could not be used. Upon succeeding in these delicate operations, the good doctor did his best to stimulate public interest in this new application of the electro-magnet by giving to the world of medicine the detailed satisfactory account of his experiments. For a relatively long period nothing further was discovered; the magnet continued to be used in removing iron fragments partially imbedded in the cornea, but not from the interior of the eye itself; but in 1847 Dr. Macwen for the first time took out a piece of iron from the inside of the eye. In this case the forceps could be of no avail unless the eyeball were totally destroyed, and though the operation was a daring venture it was crowned with success, and was subsequently described at length in an English medical journal. The instrument that he used consisted of a needle-shaped magnet which he inserted into the wound, and when no wound was visible an incision was boldly made. His method of treatment, however, remained crude and unprogressive, so that very little attention was paid to it.

In 1877 Dr. Hirschberg, after a good many experiments, invented a very simple electro-magnetic apparatus which he frequently used with remarkable results, exciting quite a deal of interest by the wide publicity he gave them, bringing forward prominently the instrument that he constructed, as well as the fullest evidence of its usefulness. This was indeed a great advance in ophthalmic surgery, although Dr. Macwen was the first to apply the magnet in such operations. To Dr. Hirschberg is due the credit of perfecting the method to a greater degree. Again, in 1892, Dr. Haab invented a machine almost identical with that of Dr. Hirschberg, but on a larger scale and of greater magnetic power, thus supplementing the labor of his predecessor and perfecting his method. This was the second step in the line of progress.

A few remarks must here be made to explain the condition of wounds caused by pieces of iron entering the cornea, the construction and operation of the electro-magnetic apparatus of Drs. Hirschberg and Haab, together with a rapid glance at their respective merits and demerits.

The condition of wounds in the eye caused by the entrance of fragments of iron differs according to the quality and quantity of the metal present. If the iron is pure, aseptic, and of small size (say from twenty to thirty milligrammes), inflammation will not ensue for some months, or even years; still the eyesight becomes impaired, gradually grows weaker, and is sometimes altogether lost. Often the iron becomes

encysted, thus damaging the eyesight; in other cases the sight is destroyed by inflammatory processes. In such cases the iron must be extracted as promptly as possible, otherwise loss of sight would soon be the result. If, on the other hand, the piece of iron is large, the condition of the wound is serious, as then the interior structure of the eyeball is generally so broken or lacerated that the eye must be taken out in order to avoid still more serious complications. If the iron fragment be septic, pus is likely to form the very next day, and the patient's eyesight depends on how soon the foreign substance be removed.

The varying condition of such wounds must suggest to the prudent surgeon the proper *modus operandi*. For instance, if the sight of the eye is "very small," and if the iron fragment enters smoothly without breaking the structure of the eyeball, then it is questionable whether to remove it or not, all depending on the difficulty or easiness of the treatment; and all this will vary according to the nature and condition of the wound; but in any case, if the fragment has passed to the inside of the eyeball it must be taken out at once, all the more urgently if any trace of pus be discovered. Unfortunately, however, in most cases when the patient presents himself for treatment it is already too late, for the most part, and the chances are against him.

Hirschberg's electro-magnetic machine is considerably smaller than the one invented by Dr. Haab. The long tube of the former is thirteen and a half centimetres in length and three centimetres in diameter (in inches about $5\frac{1}{2} \times 1\frac{1}{2}$), and contains the induction coil. At one side of the tube or cover there are two projecting brass connections between the coil and the battery; in the middle of the other end of the tube (cylinder) there is a threaded mouthpiece, to which are fitted several "tips" of wrought iron connected with the induction coil. These "tips" become magnetized on the passage of an electric current through the induction coil to such a degree that even one ordinary bichromate of potash cell (zinc and carbon) will develop energy sufficient to raise a weight of from 100 to 125 grammes (1,543 to 1,851 grains). If the power of the battery be increased, a disproportionate increase of magnetic energy will follow. When this instrument is used, if the wound has not yet closed up and healed, the tip is brought near to the wound and the iron fragment will be drawn out. Great care must be taken not to break the structure of the eye. If the wound has already healed, and if no trace of it be discoverable, then nothing remains but to open the cornea and apply the tip. If the fragment can not yet be

found, it is better to follow the direction of the iron. According to Dr. Hirschberg there are three periods in the treatment:

1. From the very day of the accident, when no pain is felt by the patient.
2. When the pain begins to be felt.
3. When the first pain has disappeared, and after a long while fever again sets in.

The success of the treatment depends, of course, on the diagnosis. We must know not only whether there is any thing really imbedded in the eye or not, but also where it is, not over-much reliance being attached to the patient's own statement. The ophthalmoscope must be used to explore the bottom of the eye in order to locate the piece of iron, the pupil having first been dilated with a solution of atropine. When the iron enters the eye there must be the wound and chaos in the back of the eye, with some blood. Blisters (little pimples filled with air) are often present, visible sometimes to the naked eye, sometimes requiring the use of a magnifying glass. In that case the fragment is beyond the reach of examination, is sometimes hidden by blood, and sometimes, after completely piercing the eyeball, passes beyond. The all-important thing is to find out just where the piece of iron is; then the meridian can be cut accordingly. If its exact location can not be ascertained, pressure with the finger may be employed as far as the strength or willingness of the patient will permit.

The Haab electro-magnetic machine (or apparatus) consists of a cylinder conical at both ends, sixty centimetres in length and ten in diameter, made of soft iron and mounted on a wooden stand about one meter high. In this soft iron cylinder are several induction wires, while on the top of the stand there is a brass pivot on which the cylinder turns, and the necessary binding-posts for the wires connecting the cylinder with the battery. The electric current or energy developed in this machine is from 10 to 20 amperes, and from 60 to 100 volts.

In using this apparatus the patient is placed as near the cylinder as possible, straight in front of the conical point. If the wound is perceivable at all, thither must the conical point be turned; if there is no visible wound, then the point must be turned toward the pupil and made gradually to approach the eyeball. Then will the iron fragment be attracted from the bottom of the eye through the front, whereupon pain will be felt. If the piece of iron be located just back of the

pupil, to avoid injury of the iris the point of the machine must be turned in another direction, since magnetic energy works in a straight line. Dr. Haab announces that as the result of his treatment, extending over an interval of many years, he succeeded in saving the eye in 60 per cent of his cases.

A word in conclusion anent the comparative merits of these machines: It is very easy to use Dr. Haab's instrument, inasmuch as one need not insert it into the eye, thus lessening the danger of injuring the eyeball, especially when the exact location of the iron fragment is not known. It is without doubt a most useful contrivance, still its size is objectionable; it is cumbrous, too, and hard to be carried from place to place.

Dr. Hirschberg's invention requires insertion into the eyeball, with evident danger of increasing the lesion, and it does not help the surgeon to locate the iron fragment; yet, as its size is small, it may be easily carried about, and it is more reliable in extracting the fragment completely from the eye than the other.

Thus there are advantages and counterbalancing defects in both of these instruments, thus suggesting to surgeons of painstaking, mechanical ability that a combination of the excellences of both would make an ideal optical instrument.

LOURDES, HAUTES-PYRENEES, FRANCE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, March 29, 1901, L. S. McMurtry, M. D., President pro tem.,
in the Chair.

Stricture of the Esophagus Following Typhoid Fever. Dr. W. O. Roberts: This boy was sent to me from Daveiss County. He is fifteen years of age; he had an attack of typhoid fever last November, from which he was laid up nine weeks and wasted away to a mere skeleton. During this time he lived, of course, exclusively on liquid food. Just before he got up he attempted to swallow a capsule of quinine and became choked on it, and it was some little time before he could get

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

it down. Since then he has been unable to swallow any thing solid whatsoever. He has gotten along very well as far as liquid food is concerned until about ten days ago, when he became unable to swallow any thing, and was sent here with the view of having something done for his relief. I have been using a bougie, but have been unable as yet to get into the stomach, even with the smallest size. I can pass it down about twelve inches, but hardly think it enters the stomach. The stricture is located about the cardiac orifice.

When he came here he was unable to swallow water or any thing else; after using the probang he was able to drink milk. I used the bougie one afternoon and again the next day, and that day after the second introduction he was unable to swallow any thing until the next morning.

He has been given beef tea by rectal injection; he was taking that before he came here, but since he has been able to swallow, this form of feeding has been discontinued.

This is the third case of stricture of the esophagus following typhoid fever that has come under my observation. The first was in the person of a medical student, who wasted away and died. He came here with the view of having something done, but went away without giving his consent to a gastrotomy. The other case was in a young woman which terminated in the same way. No operation was performed in either case, though it was strongly advised, and both patients died.

Discussion. Dr. L. S. McMurtry: A year ago last summer Dr. Roberts and myself were in New York together, and leaving him one day I went over to Philadelphia and spent the next forenoon with Dr. Price. That day he operated upon a lieutenant in the army, who had been in the campaign in Cuba and had typhoid fever for one hundred days, having the worst type of the disease, with hemorrhage from various mucous membranes. He had a stricture of the esophagus about eleven inches down, nearly the same as this boy has. I stood opposite Dr. Price when he operated. He did a gastrotomy, and after opening the stomach he dilated the stricture easily with his finger, and then had an assistant pass the largest bougie down, which passed through the stricture with ease. After dilating the stricture thoroughly with his finger he closed the stomach and the abdomen. The patient was greatly emaciated; he began to eat in a few days; his nourishment was well borne; his nutrition improved, and seven

months afterward Dr. Price told me that the result was satisfactory. As to the cause of these strictures, as far as I know they occur from ulceration.

Dr. J. G. Gecil: It is rather curious that we should have this amount of ulceration, resulting in stricture, and yet there be no evidence of it during the course of the fever. We expect ulceration of the bowel in all cases of typhoid fever, but it is remarkable that in such cases we seldom have stricture of the bowel as a result of the ulceration.

I should say that the procedure mentioned by Dr. McMurtry ought to be followed in every case like this, and I hope Dr. Roberts will have the opportunity of treating the patient in this way, and make us a further report.

Dr. W. O. Roberts: This boy complained of catarrhal symptoms for a long time previous to the attack of typhoid fever, but just what the condition of his nose and throat was, I do not know. Dr. Lederman examined him a few days ago and found perforation of the nasal septum, which he tells me is not unusual as a sequel of typhoid fever.

Dr. B. C. Frazier: I would like to ask Dr. Roberts how soon after convalescence from typhoid fever in this case the stricture appeared.

Dr. W. O. Roberts: It was nine weeks after the onset of the fever that the stricture was first observed. The other two cases mentioned were bedridden when I first saw them. I was unable to introduce the smallest bougie in the other two cases.

Dr. William Cheatham: In typhoid fever the nose often becomes dry, crusts form, and the patient picks these, which results in infection and suppuration with ulceration and perforation of the nasal septum.

There is no doubt that the stricture in the case reported is the result of ulceration, and the procedure outlined by Dr. McMurtry would seem to be the proper one. If the doctor is afraid to use the knife, the stricture could be cut with a thread passed from below upward without danger of injury to the normal tissue. By this method there would also be less likelihood of hemorrhage.

The esophagoscope is sometimes used to demonstrate these strictures, which can be easily done. I remember a case where the surgeon was about to perform esophagotomy in a boy who had swallowed concentrated lye and had a stricture of the esophagus; he had been eating plums, and it was thought a seed had lodged in the esophagus. I had no trouble in demonstrating with the esophagoscope that there was no

foreign body; that it was simply a stricture with spasm; after the boy had been given chloroform he never had any further trouble in swallowing.

Dr. F. C. Wilson: Several years ago a patient was sent to me with a stricture of the esophagus following typhoid fever, a man, thirty-one years of age. I succeeded in passing a small bougie, and gradually dilated the stricture. Dilatation was complete, and the man returned home and has remained in good condition since. This process of dilatation extended over a period of three or four weeks.

Dr. T. C. Evans: Two cases of traumatic stricture of the esophagus have come under my observation within the last few years, both of which were treated by gastrotomy with no attempt to dilate the stricture. Traumatic strictures of the esophagus seem to be different from strictures of other viscera, in that nature takes care of them. In these two cases gastrotomy afforded nourishment to the children, and with no treatment directed toward the esophagus, within a year after the gastrotomy they were able to swallow and the wounds were closed.

Dr. W. O. Roberts: I wanted to see whether the members of the Society would agree in the opinion I had already formed, that this was a case for gastrotomy with dilatation of the stricture from below. I brought the patient here to get an expression of opinion upon that subject. It seems to me this should be the method of procedure.

Enucleation of the Eye for Carcinoma. Dr. T. C. Evans: This specimen was removed from a woman forty-nine years of age. It is a tumor which involved the eyelid and a portion of the orbit. Upon microscopic investigation it is shown to be an epithelial carcinoma of the flat-cell variety, as reported by Dr. Carl Weidner.

I saw this patient through the courtesy of Dr. Cheatham, and two weeks ago operated upon her. Dr. Cheatham thought, as I did also, that it would be necessary to remove the globe along with the tumor. The patient gave the history of having first noticed this tumor five years ago, it appearing at the outer canthus of the lower lid. It was small and grew slowly. Three or four months ago it began to grow rapidly, and at the time she came to this city it was probably as large as a hen's egg. It was impossible to say whether or not the eye was involved from external examination; any way, it was impossible to remove the lids and leave the globe in place, so the entire tumor was enucleated, and the eyeball removed along with it, the optic nerve

being clipped back at the apex of orbit, and then the entire contents of the orbit removed. After evisceration of the orbit with the knife, I used the thermo-cautery and cauterized the entire margin of the wound, also the apex of the orbit. There was little hemorrhage, and no shock followed the operation. The patient left the city within a week afterward. The wound had not healed at that time, but had granulated nicely. I do not believe the periosteum of the orbit was involved. The surfaces of the tumor had bled continually, and the woman was very much emaciated, but there was no glandular involvement.

Discussion. Dr. William Cheatham: This was a very ugly-looking case. The woman needed immediate attention, and as our clinics had closed, I referred her to Dr. Evans. I have seen one or two of these cases, and even with growths larger than the one present in this case the patients had quick perception of light, showing that the eye proper was not involved. In two cases I have seen, the growths sprang from the cornea, and both patients had quick perception of light with growths larger than this. The same operative procedure was pursued with good results. I thought, and believe suggested to Dr. Evans, that it might be well to enucleate this entire growth with the thermo-cautery, as there would be less hemorrhage than following the use of the knife.

Myomectomy: Hysterectomy. Dr. L. S. McMurtry: I will exhibit photographs of two specimens from two cases of fibroid tumors of the uterus in young women, the first illustrating the application and principles of conservative surgery.

The first specimen is from an unmarried woman, twenty-eight years of age, who had a fibroid tumor of the uterus. On opening the abdomen it was found there was only one tumor, and that the uterus was perfectly normal otherwise. It was a large subserous and interstitial fibroid growing out from the uterus, and the uterus and uterine appendages were otherwise normal. I did a myomectomy, removing the tumor and preserving the uterus and the appendages. I think the result will be thoroughly satisfactory. By making a peritoneal flap and doing a myomectomy, I was able to remove the tumor entirely without opening the cavity of the uterus. I have never seen a fibroid tumor of the uterus of this magnitude with the uterus and its appendages normal.

Here is another specimen, fibroid tumors of the uterus, removed from a young woman under thirty, in which it will be seen there was one large tumor undergoing degenerative change, a subserous tumor growing from the uterus, yet in the body of the uterus were numbers of fibroids, so that any attempt to perform an operation similar to that employed in the first case would have been hopeless. Consequently it was necessary to remove the entire uterus.

These two cases occurred close together, and are illustrative of the procedures required in dealing with this class of tumors. Some operators, in attempting conservatism that is extreme, have claimed to have removed ten or twelve fibroid tumors from the uterus, even opening the cavity of the uterus, preserving the organ itself; but I think this is a mistake, because there is trouble afterward. In the majority of these cases, when the uterus is so much involved as in the second case, the removal of the tumors will still leave others that will develop and necessitate a second operation.

In the first operation I was able to preserve the uterus and appendages; in the second, it seemed to me to be proper to remove the entire uterus. Both operations were performed during February, 1901, and both patients have done well.

Discussion. Dr. W. O. Roberts: Unquestionably Dr. McMurtry pursued the proper course in each of these cases. A short time ago a young woman, a little over twenty-five, came to my office to be examined. I found her pregnant, and two subserous fibroid tumors of the uterus could be distinctly made out. I had her call Dr. Allan to attend her during the accouchement, and he said these tumors were very marked after the birth of the child. It was a breech presentation, and a long and tedious labor; I have not seen the patient since the labor. Sometimes pregnancy has a very beneficial effect upon these tumors. It is not an unusual thing for fibroids to shrink after labor. I have one case under observation now where such disappearance has occurred. The tumor has not entirely disappeared, but it has diminished materially since confinement.

Dr. William Bailey: It occurs to me to mention a case I saw many years ago, where several fibroids were removed by abdominal section by Dr. Atlee, of Philadelphia. The operation took place in this city, and there was one peculiar feature in connection with the case which I have never seen or heard of, viz., there was an aneurism in connec-

tion with the neck of the uterus; and looking up the subject casually I saw mention of a similar condition by Sir Spencer Wells, and I had a personal letter from him in regard to the matter. This patient died on the table, perhaps from a combination of the amount of blood lost and the anesthetic. Three or four quite large tumors were removed by Dr. Atlee, and the hemorrhage was very considerable.

Dr. B. C. Frazier: I would like to briefly mention a case in connection with the ones that have been reported. Two or three years ago I was called by a young doctor who had never performed an hysterectomy to do this operation upon a patient of his; I did not know very much more about it than he did at that time. We decided to do an hysterectomy for a fibroid tumor of the uterus. The tumor was found lying on top of the uterus, and we thought involved the entire organ. After breaking up a few slight adhesions and peeling around the surface of the tumor to put on a serra neoude, the tumor seemed to peel out so readily and so easily that I ran my finger down and peeled it completely off from the top of the uterus. It was a very fortunate result. It was practically a virgin uterus; the patient was a young widow, but had never borne a child, and, so far as I know, had never been pregnant. It was the first case of the kind I had seen.

Dr. L. S. McMurtry: Referring to the remarks of Drs. Bailey and Frazier: In the early days of abdominal surgery, if you will look up Peaslee's book, you will find that many operators for ovarian tumors observed these fibroids, subserous like the one Dr. Frazier described, and the temptation was great to remove them. I think Peaslee advised against their removal, because in those days their methods for arresting hemorrhage were crude and inefficient, and nearly all such cases bled profusely. But now, with our improved methods of dealing with these cases, especially with gauze and catgut, the operation has become very satisfactory.

The essay of the evening, "Lupus Vulgaris," was read by John Edwin Hays, M. D. [See page 326.]

Discussion. Dr. S. G. Dabney: This boy came to see me about his nose two or three weeks ago, and I referred him to Dr. Hays. A great deal has been accomplished since the patient came to me; he is wonderfully improved.

Dr. T. C. Evans: I have now under observation a case of lupus involving the larynx, the first case of the kind that has come under my

observation. The disease also involves the alæ of the nose, and almost the entire hard palate. There is almost complete loss of voice and total destruction of the epiglottis, although at this time it is impossible to make out any distinct ulceration of the larynx. This case is in a colored girl fourteen years of age, who gives a history of having had this trouble since she was nine years of age. It does not appear to affect her general health; in fact, she is much larger than girls of that age usually are; is well nourished, and seems to be happy and contented in every way with this exception. I have made no application to the larynx, because the disease seems to be arrested in that region at this time. This patient has gone the rounds of the various clinics, and some of the other gentlemen may have seen her. The diagnosis of syphilis had been made. I was inclined to this opinion until it was found that iodide of potassium had no effect whatever. She shows no evidence of hereditary syphilis.

There is a distinction between tubercular laryngitis and lupus of the larynx. In making a differential diagnosis between tubercular laryngitis and lupus of the larynx we have to consider that the former is quite common and the latter very rare; again, in lupus there is almost entire absence of pain, and the lesions frequently heal. I believe it is the exception in tubercular laryngitis to find any of these reparative processes going on; it is destructive from the start.

Dr. H. A. Cottell: I have had under my care but one case of lupus, and that was many years ago, in a well-known gentleman of this city, whose lupus attracted the attention of every professional man. It involved the entire lower part of his face; it involved one cheek nearly up to the eye, and did not seem to appreciably extend for many years. I never gave him any special treatment for lupus, and allude to the case only for the purpose of stating one thing in connection with it. This man was in good general health, he never had a symptom of tuberculosis of the lung, and was in good condition for many years. I suppose he went along for eighteen or twenty years, when he took a notion into his head one summer to visit Europe and the celebrated Lipp Springs, which was then a great resort for consumptives. Though he had no other tuberculous lesion, I advised against his trip. I told him it was a good plan for people who had any tuberculous trouble, or who were susceptible to tuberculosis, to keep away from public resorts, or from places where consumptives were in the habit of going. Against my advice he went to Europe, and in less than a year

after he returned he developed a rapid tuberculosis of the lungs and died. I never saw such large hemorrhages and such extensive lesions as developed in his lungs in a short time. It has now been fifteen years since he died; his wife and children are still living, and none of them have developed tuberculosis.

Dr. W. O. Roberts: Like Dr. Dabney, I think the doctor is to be congratulated upon the result of the case exhibited. My practice in such cases is to use actual cautery; I have gotten better results from that than any other method of treatment. I first curette thoroughly, then use the cautery. I can recall one very extensive case of lupus of the forearm in the person of a doctor in Bardstown, which I cured by frequent applications of a saturated solution of chloride of chromium. Since he was cured he tells me he has tried it on several other cases with equally good results.

Dr. F. C. Wilson: When Koch's tuberculin first came into use I met with a case of lupus, evidently tubercular in character, and the patient improved greatly under the use of Koch's tuberculin. I have also seen used the methylene blue application spoken of by the essayist with good results, and while I can not state positively the ultimate cure of these cases, certainly while under observation they improved greatly. Whether there was a recurrence or not I can not say. One case, involving the nose, was under the treatment of Dr. Reynolds. I saw the patient a number of times; the patient improved, but I doubt if there was a permanent cure. I have not had any cases of lupus since the more recent serums and lymphs have been in use, so I can not state from my own experience what has been the result of their employment in such cases.

Dr. William Cheatham: I have seen several cases of lupus, and I never saw one in which the bone was involved. The first case I saw was a patient from Shelby County, Ky., who had lupus involving the whole larynx, lasting for years, eventually killing him. One point I make in the diagnosis of lupus is its self-cicatrizization without treatment. Epithelioma and syphilis do not do this.

Dr. B. C. Frazier: It seems to me the treatment is to destroy this sloughing process, and any thing which will destroy it would be considered good treatment.

Dr. J. E. Hays: Lupus vulgaris usually spares bone, but attacks cartilage readily. In the case shown the cartilage only is involved in the process.

B. A. ALLAN, M. D., *Secretary.*

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THE AMERICAN MEDICAL ASSOCIATION.

The approaching meeting of the American Medical Association will doubtless be one of the most interesting in the history of that organization, inasmuch as it will be a meeting in which a complete reorganization of the Association will be considered, so as to include within its realms all county and State medical associations. If this is accomplished, then the American Medical Association, as a whole, will constitute one of the greatest and most powerful bodies of medical men in the world. We trust that every member of the profession who can go, will attend this meeting of the Association and use his best efforts to further its interests. The appended is a report submitted by the committee whose duty it has been to formulate and present a plan of reorganization. We trust that this report will be carefully read by every doctor in the land, as it is a matter in which each member of the profession is vitally interested:

The following embody the recommendations which will be incorporated in the Constitution and By-Laws to be submitted:

1. The delegate body shall hereafter be known as the "House of Delegates of the American Medical Association."

2. The House of Delegates shall consist of not more than one hundred and fifty members, and shall be created as follows: (a) one delegate for every five hundred members or fraction thereof of the State and territorial societies recognized by the American Medical Association; (b) one delegate from each of the Sections of the American Medical Association, to be elected as are other officers of the Section; (c) one representative each from the U. S. Army, the U. S. Navy, and the U. S. Marine Hospital Service.

3. Delegates representing the State societies shall serve for two years, one half, or as near as may be, of such delegates to be elected the first year for one year only.

4. Whenever the number of delegates exceeds one hundred and fifty there shall be such a reapportionment among the affiliated State societies as will bring the total membership of the House of Delegates below that number.

5. The House of Delegates—as the Sections—shall hold its sessions daily, from 9 A. M. to 12 M. and from 2 P. M. to 5 P. M., or so much of such time as may be necessary, provided that it shall hold no session on the morning of the first day of the annual meeting, nor during the time of the General Sessions.

6. The General Sessions of the American Medical Association shall be composed of members and delegates who may be in attendance at the annual meeting, and the time of meeting shall be 11 A. M. on the first day of the annual meeting, 7:30 P. M. on the first three days of the annual meeting, and 12 noon (or such other hour as may be agreed upon) on the last day of the meeting, which session shall be for the installation of the officers for the ensuing year and other concluding exercises.

7. All the officers of the Association shall be elected by the House of Delegates, but no member of the House of Delegates shall be eligible to any office whose incumbent is elected by that body.

8. No one shall be elected a member of the House of Delegates who has not been a permanent member of the American Medical Association for at least two years.

9. The election shall take place on the morning of the fourth day of each annual meeting.

10. No one shall be elected to any office who is not present at the annual meeting at which the election occurs.

11. The officers elected shall be installed at 12 o'clock on the last day of the annual meeting.

12. The membership of the Association, in addition to the delegates, shall be composed of permanent members, honorary members, and associate members.

While the Committee fully appreciate the fact that its duties do not extend below the American Medical Association, nevertheless it has in the interest of a complete organization considered the State and local societies, and to complete this urgently-required organization of the regular

medical profession, offers the following recommendations to the various State and territorial medical societies:

(a) That each State society shall at the earliest possible moment appoint a "Committee on Organization," to which shall be referred, with the Association's endorsement, the report of your Committee, and especially that part which refers to State and county societies.

(b) That each State society immediately raise funds and employ an organizer to organize the profession in its territory.

(c) That the State societies unitedly agree to federate themselves in the American Medical Association, and as a preliminary to this adopt a uniform organic law in regard to certain fundamental principles, viz., to divide their annual meeting into two branches, legislative and scientific; the legislative branch to be as small as is compatible with representation from all the county societies, and to be composed of delegates elected by the county societies.

(d) That membership in the county or district societies shall constitute membership in the respective State society without further dues, and that no one be admitted to membership in the State society except through county or regular district societies.

(e) That funds to meet the expenses of the State society be raised by a *per capita* assessment on the county and district societies.

(f) That a united effort be made to influence special societies to limit their membership to those who support the regular organization, and the semi-national and miscellaneous societies to encourage systematic organization, by covering a definite territory and also by limiting their membership to supporters of the regular organization.

(g) That each State society create a permanent committee and a fund for the purpose of enforcing all medical laws in every part of its territory.

(h) That each State society co-operate with the American Medical Association and with the other State societies in solving the problem now before the profession relating to medical education, medical legislation, reciprocity, licensing, etc.

Your Committee further recommends that a committee of three be appointed at the St. Paul meeting to continue, in behalf of the American Medical Association, the plans authorized in this report, and to act in conjunction with the large Committee to be appointed by the various State societies. Your Committee also presents herewith supplementary arguments in favor of organization, all of which is respectfully submitted.

(Signed) J. N. McCORMACK, Bowling Green, Ky.
P. MAXWELL FOSHAY, Cleveland, Ohio.
GEORGE H. SIMMONS, Chicago.

ERYSIPELAS INOCULATION FOR THE CURE OF SARCOMA.

The inoculation of twenty-six patients with erysipelas from whom sarcomatous tumors had been removed by Wyeth, and the recovery of the patients and no return of the disease, is an important clinical experience. These clinical facts are all the more important just at this time, as the discovery of the cancer protozoa by Gaylord and Parks following it so closely is more likely to interest the scientific world much more than if these facts had been determined at periods more remote from one another.

It is certain that these two important facts concerning cancer will have much to do with the management of that disease. The clinical experiences of Wyeth certainly warrant the inoculation of sarcomatous patients with erysipelas after the removal of the growth, as the process seems to have been harmless in his hands. He removes the growth, and as soon as the wound heals and is free from the danger of being directly infected, he inoculates his patient in the immediate neighborhood where the growth was located, and after the erysipelas has manifested itself treats it as he would any case met with in practice. While erysipelas under some circumstances may be a very serious thing to consider, ordinarily it is a harmless disease, the tendency of which is to recovery without any evil after-results.

CHRISTIAN SCIENCE.

The century that has just passed has been one of greatest achievement and advancement. Medicine has moved forward with seven-leagued strides. The sociologist is no longer considered a dreaming idealist. Religion no longer regards Science as an arch-fiend, and dogma is in its dotage. But there is one blot that stands out hideous on the escutcheon of the old century, and is fast besmirching the new—Christian Science. With Christian Science as a religion we have nothing to do. Its founders have taken for their corner-stone a psychic truth known to the priestcraft long before the birth of Christ, utilized by Paracelsus in his incantations, revived by Mesmer, and incorporated

firmly in psychic science by the researches of Charcot, Bernheim, and Binet and Fere.

But it has its limitations. It is neither an antitoxin nor an antiseptic. Nor does it make a good surgical dressing, and as a suture material it is still superseded by catgut and silk. Also its efficacy as an antipyretic must be considered at least doubtful.

But, seriously, we must consider Christian Science as a menace, not in the light in which medieval dogma looked upon Science, as a menace to selfish interests, but as a blow directed at the future interests of the people, irrespective of class or calling. Earnest students in sanitary science, pathology, and in every branch of medicine or sociology have labored untiringly and unselfishly for humanity, and now, cloaked in a hypocritical prostitution of the White Christ, comes a sect of imbeciles and fanatics whose avowed purpose is to tear down that which has taken centuries of unremitting toil to build.

A case which occurred recently in Louisville is to the point. The mother is a Christian Scientist. The father is not. Their child, a little girl of four or five years, was stricken with diphtheria. The father wanted medical attention, but the mother, locking herself alone in the room with the sick child, proceeded with the process of "healing" practiced by the Christian Scientists. The child, of course, died. The mother telegraphed to the department headquarters of the result, and received this telegram: "You have demonstrated nobly."

"Murderer" is a word which we hesitate to apply to any mother, but we can find no word more aptly fitted to this crime.

The statistics of the alienists show insanity to be on the increase, and certainly we have indubitable evidence in the spread of Christian Science. But as we enact laws governing the insane to protect the healthy of mind, we shall have to extend our legislation to cover this new breed of imbeciles, not only to protect the sane and helpless from their fanaticism, but to prevent these fanatics from doing themselves injury.

Current Surgical and Medical Selections.

It is announced that the dates of the next meeting of the Mississippi Valley Medical Association have been changed from the 10th, 11th, and 12th of September to the 12th, 13th, and 14th of September. This change has been made necessary because the dates first selected conflicted with another large Association meeting at the same place.

The meeting is to be held at the Hotel Victory, Put-in-Bay Island, Lake Erie, O., and the low rate of one cent a mile for the round trip will be in effect for the meeting. Tickets will be on sale as late as September 12th, good returning without extension until September 15th. By depositing tickets with the Joint Agent at Cleveland and paying 50 cents the date can be extended until October 8th. This gives members an opportunity of visiting the Pan-American Exposition at Buffalo, to which very low rates by rail and water will be in effect from Cleveland.

Full information as to rates can be obtained by addressing the Secretary, Dr. Henry E. Tuley, No. 111 West Kentucky Street, Louisville, Ky. Members of the profession are cordially invited to attend this meeting.

Those desiring to read papers should notify the Secretary at an early date.

SURGICAL NOTES.—*Hernias* co-existing with adherent omentum are never safe, and especially so in men of active life and habits. In these cases it is always best to advise operation. In *Cancer of the Breast* the presence of a large amount of fat renders less easy a thorough removal of the glands. Hence the prognosis of cure or prolonged survival must be more guarded in fat than in lean women. In *all Plastic Operations* it is important to remove the stitches as soon as possible. If left too long in the skin they will cause the formation of small scars, while if the operation has been through mucous membranes, the cutting through of stitches causes the formation of little tags. *Clubbed Fingers.*—Sickly, pale children with clubbed fingers may have chronic bone disease, or bronchiectasis, or congenital heart trouble, but in the great majority of instances there is an empyema, and hence the necessity of always carefully examining the lungs in this class of children. *Rectal Exploration.*—When investigating the rectum with a long bougie it is always well to remember that there are two possible sources of error. In the first place, the instrument may so double over that a mistaken idea of the length of the channel will arise. On the other hand, the bougie may be arrested by one of Houston's folds, thus simulating a stricture. *Cancer.*—It is permissible to do an incomplete operation for cancer only when it is knowingly performed with the object of relieving pain, soothing the imagination by giving the patient a faint hope, and getting rid of a loathsome sore, and because we know that recurrence in a scar is usually much less painful than the original

ulcerative process. *Pain.*—In the diagnosis of malignant tumors it is well to recollect that the element of pain is quite an uncertain one. Sarcomata, for instance, are usually less painful than carcinomata, and yet we occasionally encounter cases of painless carcinomata of various regions. In some instances of adenoma the pain may be just as severe as in either of the other two. *Aneurism.*—In the presence of large aneurisms of important vessels it is well to remember that operation is most likely to succeed when the occurrence is recent, when there is no evidence of aortic or mitral disease, when there is an absence of the rasp sound along the aorta, which would indicate extensive atheroma, and when there is no important visceral disease.—*International Journal of Surgery.*

OBSERVATIONS ON THE SURGERY OF THE GALL-TRACTS.—Jones (Medical Record) states that patients with long-standing disease of the gall-tracts are poor subjects for surgical operation, and surgical interference is attended by considerable risk. In such cases it would seem to be best to do first a cholecystostomy—the simplest operation and the one attended by the least risk—leaving more radical treatment for another time should it become necessary. He emphasizes: (1) The diagnostic value of the point of maximum tenderness on pressure, which is over the gall-bladder, at or near the costal margin of the ninth rib. This point in disease of the gall-tracts corresponds in importance with McBurney's point in disease of the appendix. (2) The diagnostic value of the presence of bile in the urine excreted during or immediately after a very brief obstruction of the common duct. (3) That disease of the gall-tracts is of very common occurrence, and is liable to be mistaken for other troubles which it closely imitates, so it is important that the cases be recognized early.—*The American Journal of the Medical Sciences.*

REMOTE RESULTS OF CONSERVATIVE SURGERY ON THE OVARIES AND TUBES.—Dr. W. L. Burrage (The American Journal of Obstetrics and Diseases of Women and Children) analyzes the results in eighty-five cases of conservative operations on the ovaries and tubes. The cases were all examined one year after operation, and one seven and a half years. The left tube and ovary was not found diseased oftener than the right. Anatomical cure was recorded in thirty-three out of fifty-seven cases which came under observation, and symptomatic cure was recorded in sixty out of eighty-five. After considering his cases carefully, he presents the following conclusions:

1. It is advisable to do conservative operations in all cases where the ovaries and tubes are not hopelessly diseased in all parts of their structure, except on patients who are near the menopause, on patients who have pronounced gonorrhea of long standing, and on the rare cases of malignant disease.

2. When a patient is near the menopause (over thirty-five years of age) and has ovarian or tubal disease of any considerable degree of severity, it

is generally wiser to perform complete removal, with or without hysterectomy, according as the uterus also is diseased or not.

3. In cases of well-marked gonorrhea of long standing, especially if the patient is constantly exposed to reinfection, if both tubes are seriously diseased and closed, total removal with or without hysterectomy is the operation of choice.

4. In certain cases of this class where the patient thoroughly understands the likelihood that another operation may be necessary at some future time, and wishes to take the chances in the hope of preserving the function of menstruation, conservative operation is permissible.

5. If one tube is patent and healthy in appearance, and there is enough healthy ovarian tissue to preserve, a conservative operation ought to be performed even in the presence of gonorrhea.

6. With present methods of performing resection of the tubes, if both tubes are found closed at the time of operation subsequent pregnancy is not to be expected.

7. In severe grades of inflammation of the appendages, irrespective of causation, if the ostium abdominale of one tube is patent the prospect of subsequent pregnancy after the preservation of a portion of the ovary is about one in four and a quarter, or $23\frac{1}{2}$ per cent.

8. In the less severe grades of inflammation, under similar conditions of tube and ovary, the prospect of subsequent pregnancy is about one in two and a quarter, or 44 per cent.

9. In women who have borne children, in both classes, subsequent pregnancy may be expected in 35 per cent, whereas in the previously sterile it may be looked for in only 5 per cent.

10. If it is necessary to remove both ovaries it is of no advantage to preserve any portion of tubal tissue, but, except under the conditions just enumerated, some ovarian tissue should be preserved in every case.—*The Chicago Clinic.*

AFTER-TREATMENT OF PERITONEAL SECTION.—Henry T. Byford (*Amer. Gyn. and Obst. Jour.*) gives his method of inducing peristaltic action as soon as possible after peritoneal section, for the purpose of preventing intestinal paralysis and adhesions. His success prompted him to use it in simple as well as complicated cases, in order to make the patient more comfortable and to render the convalescence more rapid. This method consists of four drams of fluid extract of cascara or some equivalent, two hours before the time set for operation, dram doses of sulphate of magnesia every hour from the time the patient awakes after the operation, and a high glycerine and water enema (3ii to 3iv) every two hours, beginning eight hours after. A high glycerine enema was given before the patient left the table after operations in which adhesions were separated and raw surfaces left. A prompt movement of the bowels and a free passage of flatus not infrequently resulted from this enema before the others

were given, and hence he began giving it as a routine practice in order to save, as far as possible, the trouble connected with giving a nauseated patient the salines and later enemas. The treatment must, as a rule, not be discontinued until the patient passes flatus, not only with the enemas, but also freely between enemas, *i. e.*, efficient peristaltic action should continue at intervals. After the first day means must be taken to maintain frequent peristalsis and a daily evacuation of the bowels. To this end two drams of sulphate of magnesia or two or three ounces of Hunyadi water are given night and morning for two weeks, the dose being regulated according to the effect. The treatment may be modified somewhat to suit different cases. If a patient be in need of a stimulant, usually an ounce of whisky is added to the enema administered on the operating-table, giving what in the Woman's Hospital is called the one, two, three enema, viz: one ounce of whisky, two of glycerine, and three of water. In patients who have lost much blood, a large, high beef-tea enema is given instead, and repeated every four hours.—*Pacific Med. Journal.*

PRIMARY CARCINOMA OF THE VERMIFORM APPENDIX.—Elizabeth Hurdon (Johns Hopkins Hospital Bulletin) adds an instance of primary carcinoma of the vermiform appendix, and one of secondary extension from an ovarian tumor. Of the ten cases of carcinoma originating in this organ referred to in the literature, the author accepts only three as established by microscopic examination. All these were shown to be of the usual type of carcinoma of the intestines, colloid carcinoma, and adeno-carcinoma. An unusually large proportion appears to be of the colloid type. The case here reported was discovered accidentally during an operation by Dr. Kelly, and was very favorable for study, as the tumor had reached only the size of 1 cm. long.—*The Chicago Clinic.*

ON THE FORMATION OF AN ARTIFICIAL ANUS.—1. An artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification.

2. Overslipping of feces may be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened in the wound or dropped into the abdominal cavity.

3. Continuance of the abnormal outlet is aided by muscle separation (Maydl), or by muscle bridging (von Hacker and Hartmann), or by the use of inflatable or moulded plugs or other apparatus.

4. It is only, however, to be satisfactorily effected (though large experience in this is desirable) by an extra abdominal iliac outlet (Witzel's iliac colostomy) to be made by opening the bowel outside and behind the iliac spine. In this procedure the bowel is compressed between the edge of the bony pelvis and the skin.

Many other methods have been proposed. Some, like Witzel, have made the outlet externally, but by gouging a hole through the iliac bone.

Other schemes have been tried and have failed. A few are so unsurgical that they have fallen stillborn. Perhaps some have yet promise, and may in time, their value not now being recognized, develop into methods of note. The author has resorted to the formation of an artificial anus thirty times, with nine deaths, of which there were two from cancer, three ulcerations, and four obstructions. Of these, sixteen were for malignant disease, either inoperable or preliminary to operation, nine were for chronic ulceration, and five were for intestinal obstruction. Among eighteen cases in which colostomy was a preliminary to operation or was a curative agent, were seven instances in which the opening was absolutely closed, five by the intra-peritoneal method and two by extra-peritoneal suture.—*Med. Rec.*

DIPHTHERIA ANTITOXIN.—McCollona's article shows the effects of the antitoxin treatment in several cities, the ratio of morbidity from diphtheria in Boston, and the percentage of mortality by age in London and in Boston. His conclusions from the observation of nearly 8,000 cases are as follows: 1. That the ratio of mortality of diphtheria per 10,000 of the living was very high in Boston previous to 1895. 2. That the ratio of mortality per 10,000 has been very materially reduced since the introduction of antitoxin. 3. That the percentage of mortality in the South departments is lower than that of any of the hospitals taken for comparison. 4. That since larger doses of antitoxin have been given the death-rate has been materially reduced, this reduction having occurred in the apparently moribund cases. 5. That no injurious effect has followed the use of the serum. 6. That to arrive at the most satisfactory results in the treatment of diphtheria, antitoxin should be given at the earliest possible moment in the course of the disease.—*Journal American Medical Association.*

HEMORRHAGE OCCURRING AFTER THE MENOPAUSE.—E. C. Davis writes that at the time of the menopause atheromatous changes are likely to take place in the blood-vessels, malignant diseases make their appearance, and the atrophic changes of the tissues become observable. After menstruation has ceased any hemorrhage from the uterus is always pathological, the causes of hemorrhage at this time being granular endometritis, atheroma of uterine blood-vessels, vasomotor relaxation, uterine polypus, uterine myofibromata, and carcinoma of the uterus. Of this last new growth hemorrhage is the danger-signal which, if appreciated by the physician, may result in years of comfort and health to the victim. If neglected, however, a horrible death awaits the patient. During the early history of carcinoma the tumor is local and circumscribed, but later becomes hopelessly disseminated. The cervix is the most frequent seat and epithelioma the most common form of malignant tumor. The history of hemorrhage after the menopause with offensive discharge is almost pathognomonic of malignancy. The most rational treatment is complete removal of the diseased uterus, with appendages, before extension has taken place into the surrounding tissues.—*Medical Record.*

THE EARLIEST SIGNS OF TUBERCULOSIS.—Professor Bozzalo, of Turin, in a paper read at the recent International Congress of Tuberculosis at Naples, has conveniently summarized the following eleven important points which are of assistance in forming a diagnosis of pulmonary phthisis in its earliest stages. They are: 1. Albuminuria alternating with phosphaturia. 2. A pseudochlorosis distinguishable from true chlorosis by the slighter degree of reduction of the hemoglobin and by the less-marked vascular and cardiac disturbances (palpitation, soft pulse, pulsating arteries, etc.). 3. The presence of gastric disturbances like gastralgia, anorexia, nausea, and vomiting. 4. Tachycardia in the absence of fever. 5. Diminution of blood-pressure. 6. A rise of temperature following bodily or mental exertion above the slight rise proper to health. In women a rise of from 0.3° to 0.4° C. is observable before the onset of each menstrual period. 7. An undue tendency to sweat after exertion, mental or bodily; also night-sweats. 8. Pain in the supra-orbital regions and in the neck. 9. A slight inequality of the pupils with a tendency to dilatation (mydriasis). 10. The occurrence of herpes zoster. 11. Enlargement of the spleen. Of these, the first seven symptoms are the most frequently met with and possess considerable diagnostic value.—*Lancet*.

ACUTE OSTEOMYELITIS OF THE STERNUM.—There exist in medical literature but eight cases of acute osteomyelitis of the sternum. Five of these cases terminated in death. In the case described by Dr. Koch recovery took place. The patient was a man, thirty years of age, free from personal or hereditary antecedents, who was suddenly attacked by violent pain in the epigastric region, with vomiting, high fever, and delirium. A physician, called two days later, diagnosed left-sided pneumonia. At the end of eight days, however, the pain localized itself especially in the sternal region, while at the same time the skin became red and a fluctuating tumor appeared over the xiphoid appendix. The abscess was incised, and gave vent to greenish pus. Several days later another abscess formed near the right nipple and was opened in its turn. Fistulæ were produced and gave issue to a large quantity of pus. An operation, fifteen days after the commencement of the manifestations, showed that almost the whole body of the sternum was infiltrated with pus. The bone was removed entirely, and the wound, in which the pericardium could be seen, was tamponed with gauze. Bacteriological examination of the pus and sequestra revealed the presence of staphylococci. The patient recovered.—*La Tribune Médicale*.

Special Notices.

FOR shaking palsy nothing excels tinct. *Aesculus Glabra*, one-half drachm, *Celerina*, eight ounces. Teaspoonful every two or three hours.

IN prescribing the products of manufacturing pharmacists, we should be guided to a great extent by the business standing of the manufacturers. No other house in the South or West has a better reputation for strict integrity than the Robinson-Pettet Company, Louisville, Ky. We do not hesitate to recommend the preparations advertised by them on another page of this issue.

DR. SMITHWICK, of La Grange, N. C., in January, 1901, number of the *Maryland Medical Journal*, says: When, in disease, bed sores occur, we must use the best means for healing them and making the patient comfortable. In my experience I have tried a great many things, but have come to the conclusion, which is substantiated by clinical results, that I obtain the best results by thoroughly washing the parts with warm normal salt solution, bathing in peroxide of hydrogen, and dressing in pledgets of cotton or strips of gauze soaked in *Ethol*. This dressing is repeated once, twice or thrice daily, as the urgency of the case seems to demand.

TREATMENT OF A CASE OF FACIAL NEURALGIA.—Bernays ("Report of a Surgical Clinic") cites a peculiarly obstinate case of facial neuralgia with treatment. The patient was a lady, aged fifty years, who showed a good family history, and whose previous health was also good. The trouble began with a severe neuralgic toothache of her lower right molars, and was paroxysmal at first, but after two months became continuous. The paroxysms generally occurred in the early morning, and entailed much acute suffering. The pain was relieved by biting strongly upon some firm object, but returned immediately when the pressure was removed. The touch of any thing cold or hot promptly excited a paroxysm. A moderate heat when sustained produced the opposite effect. In the effort to afford relief four molars were extracted, but without success. The patient strenuously held out against the use of narcotics in any form throughout the entire course of the disease. *Antikamnia* in ten-grain doses (two five-grain tablets) was found efficient as an obtundant, and was relied upon exclusively. Eight weeks after section of the nerve, when the report was written, there had been no return of her former trouble in any degree.—*The Medical News*, January 13, 1900.

THE "PAPYRUS EBERS."—Believing that physicians, of all men, are most interested in the history of their art, the makers of hemaboloids are now prepared to present to their friends in the medical profession a fac-simile reproduction of the beginning of the earliest medical treatise extant, together with transcription into hieroglyphics and translation of a portion of the text.

The famous "Papyrus Ebers," which was written during the reign of the Egyptian king Bicheres, 3,500 years ago, was discovered by the celebrated archeologist, Georg Ebers, in 1872, when an Arab brought him a metallic case containing a papyrus roll enveloped in mummy cloths, which he claimed had been discovered between the bones of a mummy in a tomb of the Theban Necropolis. A complete description of the papyrus and its history is included in the reproduction, and is certainly extremely interesting to physicians and antiquarians generally. A copy will be forwarded by the Palsade Manufacturing Co., Yonkers, N. Y., to any physician who may have failed to receive one.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

ADENOMATA AND ADENO-CYSTOMATA OF THE OVARY: CYSTS AND CYSTIC DEGENERATIONS OF THE KIDNEY.*

BY AUGUST SCHACHNER, M. D.

Professor of Surgery, Louisville Medical College.

The purpose of the essayist is to present to the Society two rather interesting specimens, and a concise arrangement of some of the best views already expressed by different investigators upon the subjects with which the paper is related. It is hoped that the paper, imperfect as it is, will be sufficient to stimulate a vigorous discussion.

Our earliest classification of ovarian tumors was based upon their gross appearances. At that period we recognized but two varieties, namely, solid and cystic tumors. To-day we insist not alone upon a clear knowledge of their histological structure, but likewise upon an intimate acquaintance with their origin. Unfortunately, the determination of their exact origin is much more difficult and obscure than that of their minute structure. In illustration of their obscure origin we have but to refer to the very excellent article on "Dermoids and other Cysts of the Ovary," by Samuel W. Bandler, M. D. (*American Journal Obstetrics*, March, 1901), from which the following extract is made:

"*Ovarian Cystomata.* Wendeler says that the cells which are the cause of the epithelial tumors of the ovary may be either the surface epithelium, the follicle epithelium, or the medullary strand. The latter are tubular rudiments of the Wolffian canals, penetrating to a greater or lesser extent into the hilus of the ovary.

* Read before the Louisville Pathological Society.

To explain the origin of cystadenomata of the ovary, these epithelial cells have, by different authors, been differently considered as the cause.

Klebs believes that the cystadenoma glandulare develops from the tubules of Pflüger in the fetal or child's ovary, with later development at puberty.

Waldeyer believes that it originates from the tubules and compartments of ova, from which the Graafian follicle develops. This occurs either in the early years or later, from tubules which are abnormally developed from the germinal epithelium.

Olshausen believes that it originates from membrana granulosa of the follicles; he considers this follicle layer to be a derivative of the medullary strands, and therefore of the parovarium.

Marchand says that it originates from the Graafian follicle or from structures which are equivalent, and which probably come from the surface epithelium of the lateral walls of the ovary.

Flaischlen considers that it originates from the germinal epithelium.

Velits believes the Graafian follicle to be the point of development.

Nagel believes that they originate from the germinal epithelium, and never from the follicle epithelium.

Steffeck traces their origin to the follicle epithelium, and believes that the germinal epithelium is likewise concerned.

Williams outlines three modes of development: (1) From the Graafian follicle; (2) from the germinal epithelium; (3) from the epithelium of the tube.

Kossman believes these tumors to originate from abnormally situated islands of tubal epithelium (analogous to the accessory tube).

Pozzi and Baussenat believe that they originate from the germinal epithelium, from the tubules of Pflüger, and from the Graafian follicle.

Burckhard considers the multilocular cysts to originate from the tubules of Pflüger.

Orth says that the carcinomata glandulare and papillare originate from the germinal epithelium, or from the follicle epithelium, or from the medullary strands.

Zweifel and Hofmeier say that the follicle is the point of origin.

Pfannensteil believes that the cystadenomata pseudomucinosae develop from the primary follicle.

Wendeler says that they do not originate from the follicles, or, in his opinion, the follicle epithelium, but from the fetal connective

tissue of the Wolffian body. He believes, further, that the epithelial covering of the ovary is to be considered the matrix of all the epithelial ovarian tumors.

Wendeler mentions that Pfannenstiel has shown us that tubular depressions of ciliated cylindrical epithelium may originate from every point of the ovarian surface, and that at every point of the surface of the ovary ciliated epithelium may be found in pathological conditions.

It is worthy of mention that the pathological conditions in the ovary could be easily explained if we were to change this observation and let it read, 'The pathological conditions stand in a causal relation to the frequently found ciliated epithelium in pathological conditions of the ovary.' This view finds support in the fact that Kossman believes that cystomata glandulare and papillare originate from displaced islands of 'Muller's epithelium.'"

Ziegler, in *Allg. Pathol. Anatomie*, page 331, speaking of adenoma and their relationship to glandular hypertrophy and carcinoma, remarks that pure adenomata are innocent neoplasms which develop from glandular structure in the form of tumors with sharply-defined outlines; they may occur in the larger glands, such as the liver, kidney, or mamma, or may develop in the smaller glands, as, for instance, the sweat glands. On the whole, they are not considered common tumors, if you exclude adeno-carcinoma and adeno-cystoma. According to their histological structure they can be divided into two groups, the one of tubular type, the other of an alveolar or acinoser type, so that we might refer to them as adenoma alveolar and adenoma tubulara. In both forms, through a strong development of epithelium and the formation of papillæ in the tubular and alveolar walls, adenoma papilliferum are formed.

Leaving the origin of these tumors and turning toward their structure, gross and minute, we refer to J. Bland Sutton, in his excellent work on "The Surgical Diseases of Ovary and Fallopian Tubes," who divides multilocular cysts into: (a) Simple multilocular cysts; (b) adenomata; (c) multilocular dermoids.

The cysts are restricted to the oöphorou. To the naked eye and with the microscope such cysts are indistinguishable from normal ovarian follicles. This may be spoken of as the indifferent stage; from this small beginning the cysts may increase in size until a tumor is produced of such large dimensions that life is rendered burdensome merely on account of the mechanical inconvenience its presence induces.

As the ovary increases in size the various loculi may retain a simple lining of flattened epithelium; in many of the cavities it disappears. Frequently the epithelium exhibits a very active change, and the cysts become occupied by glandular structures, sometimes of great complexity. Such complex cysts are occasionally referred to as multilocular glandular cysts, but they are more appropriately termed ovarian adenomata.

The same author's description of an ovarian adenoma is such a clear one that it is copied in its entirety:

As a rule it has a dense fibrous capsule, and the surface is frequently lobulated. These tumors attain great dimensions, and are composed of innumerable cysts, which vary in size from a cavity no bigger than a pea to one holding a quart or more of fluid. Critical dissections of such cysts enable us to recognize three varieties of loculi. In typical specimens a honeycomb-like mass will be found projecting into some of the larger cavities, and occupying usually one third of its circumference, so that a section of the cavity resembles a signet-ring; such are called primary, while the cavities occupying the honeycomb-like portion are secondary cysts, and are, as a matter of fact, mucous retention cysts. The third set of loculi contain no honeycomb-like structures, are of small size, and histologically are indistinguishable from distended ovarian follicles.

When complex cysts of this character are quite fresh, if the smaller loculi are punctured with a sharp knife and the fluid watched as it flows through the opening, a small opaque body, about the size of a grape-seed, will often be detected escaping. These bodies have been described as ova. Sometimes many of the cysts will project upon the surface of the tumor, having made their way through the capsule by absorption, and produce a resemblance not unlike a colossal bunch of grapes.

Lawson Tait has described cysts of this character as Rokitansky's tumor. Mr. Reeves showed a specimen at the British Gynecological Society which Mr. Lawson Tait identified as a typical Rokitansky's tumor. I (Mr. Sutton) had the opportunity of examining this cyst. It was a typical ovarian adenoma with cysts projecting through the capsule.

The primary cysts, in their early stage, are lined with rich columnar epithelium, and in that portion of their circumference which corresponds to the honeycomb of larger cysts mucous glands are found.

Indeed, the lining membrane of such cysts is identical with mucous membrane. Occasionally a lock of hair may be detected sprouting into one of the larger loculi.

The malignancy of ovarian adenomata requires careful investigation. Evidence is accumulating in favor of the view that rapidly growing adenomata of the ovary may, if the loculi rupture, infect the peritoneum. In some isolated cases there is reason to believe that the growth recurred in the pedicle.

Microscopical examination of the specimen presented this evening shows it to be an adeno-cystoma.

The larger cyst wall fibrous, the epithelial lining more or less destroyed. In the smaller cysts contained within the larger one the epithelial lining is columnar, some few possessing a cubrical cellular lining; sections of the honeycombed portion show an adenomatous type with large columnar epithelium; in the connective tissue between the cystic spaces are to be found mucous glands. In some of the smaller cysts numerous small papillæ, covered with columnar epithelium, are to be seen projecting into the cyst cavity.

From the foregoing description it is evident that a superficial examination is quite sufficient to establish the identity of the tumor presented this evening as a typical cystadenoma of the ovary.

An extended clinical history of this case has been carefully and purposely omitted, lest its introduction might serve to divert the interest and discussion from that of a purely pathological nature.

Briefly, the subject was that of a mulatto, aged forty-three, nulliparous. There was but slight menstrual disturbance in the form of menorrhagia. The tumor apparently developed in about fifteen months, and weighed about twenty pounds.

It may be profitable at this point to present in a brief manner some of the distinguishing features of the more interesting ovarian tumors. In so doing I am again obliged to borrow liberally from the very clear arrangement which Mr. Bland Sutton has so ably presented. Speaking of the malignancy of ovarian tumors, this author remarks: Surgeons generally regard an ovarian dermoid as non-malignant. The histories of the patients show that this is not always so.

Doran makes the following important statement: "Mr. Thornton assures me that he has known several cases where malignant deposits have recurred in the pelvis two or three years after the removal of large dermoid cysts, containing soft white growths that strongly resemble sarcomata."

Thornton has recorded a case in which he removed an ovarian dermoid from a woman in June, 1881, and she died of recurrence in May, 1882. The details are unfortunately very meager.

The malignant tumors in the ovaries of children—termed by some sarcomata, by others carcinomata—are histologically distinct from the common forms of cancer or sarcoma, and they ought to be arranged provisionally in a group by themselves under the term oöphoromata, because they seem to be special to the connective tissue of the oöphoron. The distinguishing features of oöphoromata are these:

First. Histologically they repeat the character of the connective tissue of the fetal ovary.

Second. The growth usually affects both ovaries simultaneously, but in a fair proportion of cases it is restricted to one ovary.

Third. They rarely occur after puberty.

Fourth. Sometimes they occur in association with ovarian dermoids before puberty, and lead to secondary deposits.

Fifth. They recur locally after removal.

Sixth. In fetuses and very young children the cell elements preponderate.

Seventh. Toward puberty they tend to assume an alveolar arrangement and mimic the structure of cancer.

The cysts which arise in the paroöphoron are, as a rule, unilocular, and differ from oöphoritic cysts in the following particulars:

1. They do not affect the shape of the ovary until they have attained an important size.

2. They always burrow between the layers of the meso-salpinx, and when large make their way between the layers of the broad ligament by the side of the uterus.

3. The interior is beset with warts.

The warts in such cysts vary greatly in number. Sometimes only a few clusters are present, but in others they are so luxuriant as to cause the cysts containing them to rupture. These warts are very vascular, bleed freely when handled, and are frequently calcified.

The distinguishing feature of these paroöphoritic cysts is that they contain papillomata; but all papillomatous cysts of the ovary are not paroöphoritic in origin. The papillomata of these cysts, when they form such large dendritic masses, are very vascular and easily bleed when manipulated. The cells are usually spheroidal in shape, and the stroma is very scanty. Frequently the warty masses undergo calcification.

An important pathological and clinical fact connected with these cysts is that when they rupture the fluid they contain is scattered broadcast over the peritoneum. When there is general papillomatous infection of the peritoneum the warts are most numerous on the serous membrane lining the recto-vaginal pouch and on the omentum and mesentery.

The papillomatous infection of the peritoneum when these cysts burst is also interesting. It has been clearly established that when the abdomen has been opened for the removal of a papillomatous cyst the peritoneum has been found studded with warts. A few years later the abdomen has been reopened, and all the peritoneal warts have disappeared. Thus they behave like warts on the skin. This fact must be borne in mind, or the operator will hastily assume the disease to be malignant when he finds general peritoneal infection.

An analysis of trustworthy lists of ovariectomy cases shows that papillomatous paroöphoritic cysts are rare before the twenty-fifth year; the period of life in which they are most frequent is between the twenty fifth and fiftieth years. Peritoneal infection may ensue when such cysts are tapped if any of the fluid escape into the abdominal cavity. Tapping is therefore inimical to the patient.

Cystic Degeneration of the Kidney. A brief history of the case representing the second specimen is as follows: Mrs. M., age forty-five, mother of two children. On examination a tumor was noticeable occupying the left hypochondriac region. The tumor was quite movable in character; the urine contained minute traces of albumen, specific gravity 1010 and an acid reaction. Prior to the operation she had had attacks attended with great pain, fever, and prostration; her appearance was that of one suffering from some malignant growth.

Newman divides cysts of the kidney into three classes: (1) Simple cysts and cystic disintegration; (2) Those due to the presence of parasites; (3) Those which may be included under the term congenital cysts.

When the tubuli uriniferi are closed by deposits or tube casts or occluded by the contraction of connective tissue the same kind of change results. The secretion accumulates behind the obstruction and distends the capsule of the Malpighian bodies or the lumen of the tubules into cysts filled by altered secretion.

These simple cysts may be found in kidneys otherwise normal. Their walls are thin and project beyond the surface of the kidney; the

contents are generally clear, colorless or pale straw color, and contain more or less albumen. But while solitary renal cysts are usually filled with such material, in a few instances they have been found to be occupied by blood-stained fluid or gelatinous matter, and in the contents of some cholesterine has been discovered. The development of these cysts is undoubtedly due to the same causes as lead to the development of multiple cysts.

In diseased kidneys cysts are more frequently seen. The whole kidney may be converted into a huge conglomeration of cysts of varying size and color, and so closely packed together that with the naked eye it is impossible to detect a trace of renal tissue; but even although the organ is increased to ten or twenty times its normal bulk, its renal form is maintained by the enlarged mass. The degeneration generally affects both organs, although perhaps not to the same extent; and it is not uncommonly associated with the formation of cysts in the liver and thyroid gland. The kidneys may not only attain such dimensions as to be felt during life, but a case has been recorded in which the organ so increased in bulk as to weigh sixteen pounds, and measured fifteen and a quarter inches in length.

Cysts of small size are frequently observed in the cortex, and owe their existence to a constricted condition of the neck of Bowman's capsule, or obstruction of the tubule close to the Malpighian body. Cystic degeneration of the kidney has been confounded with ovarian cysts, and has been removed as such by several well-known surgeons, among whom I may mention Peaslee, Esmarch, Campbell, Ollier, Archer, Leopold, Schede, Keeling, and Goodell. Wagner has published a case of Thiersch's in which this disease was mistaken for hydatid of the liver.

Morris, in his work on Disease of the Kidney, recognizes five varieties of cysts:

First. The small and numerous cysts which occur in granular kidney, and which are of pathological rather than clinical importance. They never give rise to tumor, and are not amenable to surgical treatment.

Second. Conglomerate cysts or cystic metamorphosis of the kidney. This form of disease is sometimes congenital; sometimes found in adults. The kidneys thus affected are occasionally of great size, and present themselves as abdominal swellings.

Third. Dermoid cysts.

Fourth. Simple cysts.

Fifth. Hydatid cysts.

Sixth. Paranephric cysts or cysts which are external to the capsule and formed in the circumrenal fatty tissue, but which are intimately adherent to the kidney and sometimes communicate with the renal cavity. They are indistinguishable in their clinical aspects from some of the cystic formations of the kidney itself.

Beck (Contribution to the Surgery of Multilocular Cysts of the Kidney, *Annals of Surgery*, Vol. 33, page 147) refers to true cystic degeneration of the kidneys in adults as a rare disease. It occurs mostly between the ages of thirty and sixty, and predominates in the male.

Whether it is of congenital origin or not is still open to discussion. While Koenig, Fuerbringer, Rosenstein, Birch, Hirschfeld, and Marchand are in favor of the congenital theory, Ebstein and Virchow doubt it; the latter only admitting that a partial fetal degeneration may last for many years. Leichtenstern, Arnold, and Landau speak of pyelopapillitis or nephropapillitis as a cause, while Lejars assumes a peculiar proliferation of the epithelium of the uriniferous tubules, followed by colloid metamorphosis.

In cystic degeneration the kidney becomes considerably enlarged, the greater portion of its substance being converted into a system of cystic cavities, the size of which varies from that of a microscopical speck to that of a large walnut. In nearly all cases both kidneys are more or less affected.

The disease may last for decades without causing any symptoms at all. One of its most deplorable characteristics is that the clinical symptoms generally do not manifest themselves unless the degenerated organ has become greatly enlarged. It is only then that traces of albumen are temporarily found in the urine, so that the suspicion of a renal lesion is raised.

In differentiating it must be considered that a malignant tumor would not exist for so long a period without causing marked symptoms, among which cachexia would be most prominent. In pyonephrosis, cystitic or pyelitic symptoms or tuberculosis, etc., would be found. But hydronephrosis, echinococcus, and cystoma could easily be mistaken for cystic degeneration. It is true that in the latter fluctuation may be detected, while in the others a more solid and nodular tumor may be palpated, but in most instances such differentiation will be unreliable.

Microscopical examination is likelier to clear the diagnosis. In the puncture-fluid from cysts containing dark brown fluid, Hoehne found a number of brown, round bodies, varying from the size of a lentil to that of a five-cent piece. The center was structureless. They also presented one to five concentric rings, and had a radiating striation from the center to the periphery. According to Hoehne, these peculiar rosette-like bodies, if found in the puncture-fluid from a supposed renal growth, strongly suggest the enlargement being due to cystic degeneration of the kidney.

Cystic kidney may well be suspected in the case of presence of a renal tumor, when sudden uremia or anuria occurs in an individual who heretofore had not shown any signs of renal disturbance. The suspicion becomes a certainty if a renal tumor is found on both sides.

LOUISVILLE.

SOME QUESTIONS REGARDING THE DANGER OF SEPTIC INFECTION FROM CERTAIN REMEDIES AND METHODS IN COMMON USE.*

BY A. G. BLINCOE, A. M., M. D.

My object in presenting this paper is simply to put some questions to the Society and get the views of the members thereon.

1. In the light of modern pathology, aided by the bacteriologist, is not the promiscuous use of blisters, as ordinarily employed, a more or less dangerous practice? When the cuticle is raised and removed there is left a raw surface through which disease germs may undoubtedly gain access to the body, unless all the usual antiseptic precautions are fully observed.

I do not propose to enter into the therapeutics of blisters, but will simply ask the Society whether the advantages which they possess, if any, over the less dangerous rubefacients, in many cases at least, are sufficient to counterbalance these dangers and the suffering from pain and soreness which they generally cause? The same question may be asked in regard to the use of wet cups. Are not dry cups less dangerous, if not oftentimes equally useful?

2. Are we not too careless in our methods of extracting teeth? How often, as a rule, do we sterilize our tooth-forceps? Some twenty-

* Read before the Brashear Medical Society at Springfield, Ky., April 16, 1901.

odd years ago I went to a neighboring medical friend to get an upper bicuspid tooth extracted. He lanced my gums with his pocketknife and used a pair of forceps without any cleaning at the time, as was the custom in those days, and to which I then found no fault, and after the tooth was extracted my face swelled and pained me considerably for some days. Was this pain and swelling caused by septic infection or by taking cold from bathing my feet soon afterward, as suggested by one of my friends? I can, however, recall several such cases occurring in my own practice under similar circumstances, which, so far as I know, were not followed by any bathing soon afterward at all.

3. Another practice followed by some, to which I have serious doubts as to the propriety of, is the use of the Kelly pad as commonly employed in ordinary obstetric practice. Usually, after the labor is completed, a little cold water from the rainbarrel is thrown over the rubber bag, and it is rolled up and put in a gripsack, where it remains until the doctor using it is called to the next labor case. Many of these bags have perhaps been for years in use without ever even once having been sterilized.

Gentlemen, so far as I am concerned, I would much prefer putting next to my parturient patients the clean sheets usually found in any well-regulated household.

I should like for every member and visiting physician present to give his unbiased and candid views on these questions. It may be that I am unduly apprehensive in regard to them, but I shall not fall out with any of you if you differ with me, as I recognize the fact that the prime object of our meetings is the full and free discussion of medical subjects, and, as already stated, I simply put these questions to you for the purpose of getting your opinions on them.

Another common and dangerous practice is the careless use of the uterine sound. This matter did not occur to me as being appropriate for my paper, from the fact that attention has already been called to it, but was recently suggested by a prominent surgeon with whom I was talking on the subject since the title of my paper appeared on our programme.

A medical friend of mine told me several years ago of a case which resulted fatally, in which he believed death was caused by carrying matter from the vagina to the interior of the womb by means of a uterine probe or applicator wrapped with absorbent cotton.

BARDSTOWN, KY.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, April 12, 1901, the President, Louis Frank, M. D., in the Chair.

Case of Leuco-Sarcoma of the Choroid. Dr. J. M. Ray: This specimen is one of leuco-sarcoma of the choroid. Dr. Cheatham showed a specimen similar to this a few weeks ago to this Society. I saw the patient a week ago yesterday for the first time. His family history was good. He was sixty years of age, and the history was that a year ago he went to an optician and was fitted with glasses. Soon after he put on glasses he noticed on the nasal side of right eye some obstruction of his vision. This gradually enlarged, and he went back to the optician, who changed the glasses and assured him there was nothing the matter with his eye. This obstruction continued to enlarge until he consulted me. When I saw him he had vision in this eye of $\frac{8}{20}$; the external part of the eye was practically normal; tension normal. When I looked into the eye with the ophthalmoscope I found a circumscribed, elliptical elevation of the retina between the external and superior rectus muscles. It extended from a disc breadth from the upper and outer margin of the optic nerve as far forward as could be seen. As it came forward it measured with the ophthalmoscope about 11 D, but toward the ciliary processes the elevated retina began to recede. The character of the detachment of the retina being fixed, the peculiar shape and location, the age of the patient, his history, etc., led me to make a diagnosis of subretinal growth.

I explained the condition to the patient, and he submitted to the operation of enucleation, and the specimen is presented for your examination. The other eye was perfectly normal in every respect.

Discussion. Dr. William Cheatham: I have never seen a more perfect specimen of sarcoma of the choroid. In the case I reported, to which Dr. Ray referred, there was some detachment of the retina, and the patient had vision of nearly one half. I recently saw an article giving statistics in reference to the final outcome of these cases, stating that the large majority of them had recurrences resulting fatally, especially in sarcomata of the round-cell variety, whether there was any extension outside the orbit or not. In all these cases it is well to examine the

*Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

orbit thoroughly, because there may be a secondary growth not connected with the eyeball. There may be several separate growths. Recurrence is usually local, but it is more common in the liver than elsewhere. In my case referred to there was a leuco-sarcoma filling the entire globe; there was a recurrence in a few months in the orbit, also in the liver, the woman living about six months after primary removal of the growth. It is a little remarkable how common these growths are now, compared with the cases seen some years ago.

Fracture of the Skull Without Symptoms. Dr. A. M. Vance: These specimens are fragments of the inner and outer table of a little boy's skull. Two weeks ago I was called by Dr. Bailey to see a little boy who, while playing with some companions, had been struck by the sharp point of a rock on the right frontal region, making a small punctured wound. There were no symptoms except hemorrhage, but the doctor had already discovered that the skull was fractured, and called me in consultation. We insisted upon an exploration, which was done at the infirmary an hour or two afterward. I found the fragment of inner table driven well down into the dura, the outer fragment on top of it. The aperture through the outer table was not more than one quarter the size of the puncture through the inner table, as you will see by the specimens presented. The fragment from the inner table is about one inch in diameter, that of the outer table oblong, averaging about one quarter of an inch.

The point I want to make is that ordinarily the bone in these cases is elevated by the use of the trephine. On non-hairy portions of the scalp this is unfortunate, because the trephine opening always shows a marked depression, whereas by use of the chisel an oblong opening may often be made in such a case as this, the inner table removed, and the opening in the skull that is left is so small that there results no depression whatever. I think this boy will only have a linear skin scar to show for the injury, as I removed the two fragments of the inner table through a small opening made with the chisel, rather than use a trephine, as is usually done.

The importance of the operation and removing the fragments of bone is apparent. Dr. Bailey, as the physician in the case, having decided upon this course, of course obviates the necessity of a secondary operation. A great many physicians would have regarded the slight injury as of no consequence, and would have allowed the wound to heal without exploration.

Discussion. Dr. William Bailey: The symptoms were exceedingly slight in this case. The boy, after being struck, went to a neighbor's house, being afraid to go home; they washed the wound and tied it up, and the boy was allowed to go home. The father was not much disposed to have a doctor called, but the mother insisted upon my seeing the case. I found an opening through the outer table of the skull not much larger than a lead pencil, and believed that probably the inner table in being broken through the aperture would be much larger, and should be attended to at once. I asked for consultation, and it was not over two hours from the time of the accident until the operation was performed. There has never been a further symptom in the case, and the boy seems to be perfectly well.

Case of Renal Calculus Without Symptoms. Dr. J. B. Marvin: The specimen which I show you is a calculus passed per urethram, the largest that I have seen to be voided without the slightest symptom. The patient was a gentleman who had several years ago an attack of acute Bright's disease, and, under the care of the late Dr. Hewitt, made a good recovery. Afterward he was a patient of the late Dr. P. B. Scott, and I saw him last summer in the absence of Dr. Scott in a mild case of typhoid fever. He has always had an irritable bladder at times; his urine frequently contains uric acid and urates. He rides a bicycle a great deal, takes lithia water, etc., on his own responsibility. After my return last summer he stopped at my office and said he had some pain about the bladder, and asked if I thought he had better stop his bicycle riding. Some time later he came by one Sunday morning and brought me the smaller fragment of stone which I exhibit. He said he went to the closet to urinate, felt a little stoppage of the urine, looked in the water closet and found this fragment, which he brought along. The specimen, as will be observed, is perfectly smooth and flat, and, as the patient complained of no pain, I thought it was a piece of enamel from the closet, and so told him. No examination was made. The following week he was at his place of business, and went to urinate; when about half through he said the stream suddenly shut down, stopped; this was repeated several times during the course of an hour or two; the last time he said he passed through the urethra the larger of the two stones I show you. This calculus is also perfectly smooth, semi-circular, and three eighths of an inch in diameter. It has been analyzed, and proves to be uric acid. The stone is evidently from the

kidney and not vesical; it is being broken up in the bladder, and the peculiar part of it is that no pain was occasioned by its passage through the ureter or urethra.

Discussion. Dr. A. M. Vance: The fact that this larger stone is fractured or broken on one side interests me. I once did a lithotomy for stone and found it broken; I also found a gall-stone broken into fragments on one occasion. It is a curious thing to me how fracture of these stones can occur.

Dr. B. C. Frazier: I have had occasion lately to see two or three cases of kidney stone, but have never seen or heard of one in which there was not considerable pain. I have had a lady under observation for a few years; she has passed quite a number of stones from the bladder, during which time she has great pain; and she has agonizing pain in the passage of stones from the kidney to the bladder. The stone shown by Dr. Marvin was evidently in the bladder quite a while, because it would be absolutely impossible for a calculus this large to pass through the ureter without causing pain. I know of no theory to explain the breaking of these stones in the bladder, unless large amounts of lithia water might have something to do with it. I remember one case, which was also seen by Dr. Vance, where a patient passed a great many small kidney stones composed of uric acid. I put this patient on urotropin in fifteen grain doses every four hours for five days, which seemed to have a beneficial effect.

Dr. Louis Frank: In regard to the symptoms of renal calculi, I would call attention to the fact that a number of cases are cited by Morris where very few symptoms were present, and the patients were treated for other troubles. Many cases of calculus anuria have occurred where this trouble had not been suspected until suppression of the urine occurred. Morris cites numbers of cases where few symptoms have occurred, and none referable to the kidney directly until the time of the operation, the patients having been treated for various other troubles. I mention this as bearing upon the fact that these stones may exist in the pelvis of the kidney for some time without giving rise to sufficient disturbance to make us suspect their presence.

Case of Tubercular Peritonitis. Dr. B. C. Frazier: At the meeting of this Society four weeks ago I reported the case of a young woman who had been taken with a chill and suffered intensely for a number of days with pain about the abdomen. Drs. Vance and Frank saw her,

and thought she had some trouble about the gall-bladder, probably gall-stones. She did not get any better, and continued to suffer with intense pain in the abdomen, radiating always from a central point in the region of the liver. Finally she was moved to the infirmary and operated upon with the assistance of Dr. Frank, Dr. Vance also being present. Much to my surprise, although I did not make the diagnosis of gall-stones, the gall-bladder was found to be normal or only moderately distended; but passing my finger under the liver I found quite a number of adhesions, and investigating further, many peritoneal, intestinal, and omental adhesions were found; the liver was bound down by adhesions; especially was this true at its upper portion. The diagnosis was then made of tubercular peritonitis. There was but little fluid in the cavity. I took away a small portion of the omentum, which was examined by Dr. Frank, and the diagnosis of tubercular peritonitis confirmed. The only thing done in the operation was to break up the adhesions.

The patient made a good recovery, and has now gone home after being in the infirmary two weeks. A rather curious thing about the case is that four or five days after the operation she developed a tender joint, the phalangeal and metatarsal of the middle finger, extending from the second joint down to the knuckle. This went along for a number of days, and Dr. Frank saw her again and was inclined to the opinion that it was an ordinary rheumatic manifestation. Later Dr. Vance again saw the patient and thought it was suppuration of the tendon, and advised opening; but with hot applications pain and swelling subsided for the most part, although the finger is not yet well. Redness has disappeared, and otherwise she is perfectly well. Her appetite is good, she is gaining in weight, and going about the house in good condition. Whether or not this could have been a tuberculous joint is a difficult question to answer. The trouble came up so rapidly that I hardly think it could be tubercular, although this is to be thought of.

Dr. A. M. Vance: This girl evidently had all the symptoms pointing to disease of the gall-bladder, and I was surprised to find that she suffered from tubercular peritonitis. The trouble about the finger I feel sure was a thesitis, not joint disease, and was due, as it turned out later, from the fact that this girl, in a tremendous paroxysm of pain, was in the habit of reaching up and grasping hold of the bed, the greatest strain coming on this finger, and she had inflammation of the tendons. At one time it seemed there was some suppuration, because

of the intense pain between these joints, the sticking pain on pressure. However, hot applications quieted the pain, and if suppuration existed it was taken care of by nature. It was too rapid to be a tuberculous process.

Dr. F. C. Wilson: The case illustrates that the best treatment for tubercular peritonitis is opening the abdomen and exposing the surface. The recovery of this patient would rather tend to prove that is the correct treatment.

Dr. Louis Frank: I saw this patient with Dr. Frazier, and looked upon the case as did Dr. Vance at the first visit, as probably one of gall-bladder disease, either stones or a mild grade infection, possibly even suppurative. The patient was operated upon with the idea of finding such a condition present. There were numerous adhesions, and the omentum, mesentery, and intestines were studded with miliary deposits. We removed a piece of the omentum, which, under the microscope, showed the characteristic appearance of these nodules. I thought the trouble about the finger was rheumatic, because this girl had previously had, according to the history, some swelling and pain about the ankle and also the wrist, which had disappeared. This case should impress upon us the fact that we should always have in mind the occurrence of tubercular peritonitis when we open the abdomen for other troubles.

I operated upon a girl six weeks ago with tubercular peritonitis where the history was one typical of appendicitis, with the history of previous attacks even accompanied by elevation of temperature, and all the classical symptoms of an appendicitis. At the last attack, during which I operated, she had an elevated temperature, localized tenderness most marked in the right iliac fossa, and the diagnosis was apparently clear. There was some tenderness diffused over the whole abdomen, but it was most marked in the right iliac fossa, as we usually expect to find it in cases of appendicitis. Operation revealed a diffuse tubercular peritonitis with very little fluid, and there were no constitutional symptoms of tuberculosis, localized or otherwise, and she had no elevation of temperature except during these attacks. The appendix was found in a mass of adhesions, omental and intestinal; it contained no pus, but a great many miliary tubercles were found scattered over the appendix and its mesentery. The appendix was removed and the cavity closed without drainage after breaking up the adhesions.

This girl has made a complete recovery, and since the operation, barring a stitch abscess, has presented no other symptoms.

As to the explanation of the good resulting from abdominal section in cases of tubercular peritonitis, I have nothing to say. We simply know patients improve after opening the peritoneum; this occurs after incision, but does not occur after tapping. Improvement is probably not the result of air being allowed to enter the cavity, because exposure through a small incision is necessarily slight; it must be due to some other cause.

In lieu of a written paper, the following report on "Myxedema" was made by Joseph B. Marvin, M. D.:

I have been especially interested lately in some cases where the family history seems to play an important rôle, three generations being represented.

I have three cases of myxedema under observation at the present time, two presenting only some of the features of the disease, the other being a typical case, complete in every respect. It is this last case, with the family history, that I wish to speak of briefly.

The first of these cases I have seen most recently, the patient having been but a short time under my care. Mrs. B., aged sixty five years, married, and has had a number of children. She has been an invalid the better part of her life; one of those gloomy, despondent individuals, becoming more so in the last year; in fact, her condition has become such that some of her family have thought her mind was slightly affected. She has had marked intestinal disturbances, constipation, with great gaseous distension. It seems at times almost impossible to get her bowels to move. She had milkleg following one of her labors. She has had a weak heart, complains a great deal of cold, and keeps her room excessively hot. She has a dry skin; wants to sweat; thinks she would feel better if her skin would act. She has a very peculiar, harsh, leathery voice. At my first visit I joked her about having the "goslins," telling her that she was too old to have this character of voice. She has a large bald spot on the top of her head, larger than the palm of my hand.

The burden of her complaint when I first saw her was swelling about the neck in the supra-clavicular regions; some soreness and stiffness about the neck; she thought it was rheumatic. This swelling has increased, both above the clavicle and in the scapular region, and

more recently under the arm anteriorly, just at the outer edge of the pectoral muscle, then below the knees, not anteriorly but posteriorly, and a little above the joint.

This, I take it, is an undoubted case of myxedema. She has been given the thyroid extract, and has taken it intermittently, and has thought she received more benefit from a pill containing oxgall, pancreatin, a little podophyllin, and compound extract of colocynth, as it makes her bowels move and she feels better.

CASE 2. Another case simulates this in many ways, except it is of longer duration. The patient has been under my care eight years; rather, she has been under my care since 1876, as I have been the family physician. It has been about eight years since she first developed symptoms that I recognized as those of myxedema. This lady is seventy-six years of age. She has a puffiness of the face, the cheeks, and neck; not so much about the eyes; marked enlargement in the scapular region, with a hard, firm, dense feel, not pitting on pressure, and no exudation on puncture. There is marked enlargement of both arms above the elbows, a triangular-shaped mass that is semi-translucent, and very hard to pressure. A similar condition exists under the knees; she has also had marked cardiac disturbance. A number of years ago I detected a murmur. She has had arcus senilis for a long time, with high-tension pulse. She suffers a great deal periodically with swelling of the throat, and thinks she has tonsillitis, but it is not tonsillar. Before putting her on thyroid extract I had in mind the high-tension pulse, and from the symptoms I thought at the time of arterio-sclerosis, and gave her the remedy for the arteries—iodide of potassium. She has taken this in three- to five-grain doses intermittently for a long series of years. She has undoubtedly a myxedema. She is not despondent, and has none of the mental symptoms. The disease has progressed very slowly.

At present (she was here last week) I have put her on thyroid extract again. She has been to Frankfort, Kentucky, on a short visit. The thyroid is acting badly; it causes flushing of the face; her pulse is 120 to the minute, and she is very short-winded on slight exertion. The thyroid is acting as a depressant here, and I believe this is the common experience if there is any cardiac involvement.

Both of these patients developed their trouble after the menstrual periods had ceased, both developed it late in life, both are widows, both have borne a number of children, the latter having had a great deal of

trouble with one of her children; her single daughter has a case of epilepsy which I have reported to this Society, she having been under my care since 1876, and is the only case that I have watched for such a long period, and has had no recurrence of the epilepsy.

CASE 3. The third case is a younger woman, aged forty-five years, the widow of an army officer. She has a typical case of myxedema, lasting over a number of years, very slowly and gradually developing. The diagnosis of Bright's disease was made by a number of doctors in different parts of the country. Her history briefly is as follows:

She was married twenty-four years ago. Her first child was delivered thirteen months after marriage, a very long and difficult labor, and instruments were used. Just what was done is not now clear, but she says that her bones were separated, and she did not walk for eighteen months afterward. The child died of some gastro-intestinal trouble. Nine months later she bore her second child, who is living. No other pregnancies. Her trouble began two years before the birth of this second child, and of course was not recognized, as that was eighteen years ago. She noticed first a white, translucent swelling above each eye. During her second pregnancy she suffered intensely from nausea, but had an apparently easy labor. Before that time and since even up to the present suffers from menorrhagia. Two years after the birth of this child at Leavenworth, Kansas, she had severe bowel trouble, diarrhea, fever, hemorrhages, etc., which lasted for a number of months. At Sioux Saint Marie the post doctor claimed she had impacted feces and emptied the bowel well. She made a slow recovery after having this diarrhea lasting for a number of months. On account of her pallor, marked anemia, and swelling about the eyes, the diagnosis of kidney trouble was made. At another place liver trouble was diagnosed. She went back to Montana and there felt very well, but pallor and swelling about the eyes continued, and the post surgeon told her she had Bright's disease and was liable to die at any time. This was a great shock to her. She came East, went to Saratoga, then to New London, and consulted Dr. Eli McClellan again, who told her she had no Bright's disease. She consulted Dr. Knapp, of New York, to see if he could find in the eyes any evidence of Bright's disease. He told her she had no evidence of this disease. She was a very nervous, energetic woman, and worried a great deal about her trouble.

She came here five years ago, and was operated upon for hemorrhoids, and she had a very hard time from it. The operation was repeated within a few months after her return West. Her husband died suddenly; it was a great shock to her, and she came back here looking wretchedly. I watched her with a great deal of interest, owing to the slow and gradual development of this trouble. Dr. Cheatham saw her and recognized the disease. He did not tell her what it was, but advised her to consult her family physician. I was already camping on that trail. I had her on various methods of treatment, tried Armour's and Parke, Davis & Co.'s thyroid extract, but she did not improve, though she grew worse very slowly. She spent the summer three years ago at Pewee Valley, Kentucky. There she had a sharp attack of diarrhea, which pulled her down still more, and she was then a wretched-looking object. Each month she menstruated profusely. She left here and went to Washington, D. C., and there her trouble developed very rapidly in the next few months. She went to Fortress Monroe, grew worse there, then went to New York to see an army surgeon there, who recognized the trouble. She had a typical case of myxedema at that time. Elevation of the eyebrows, protrusion of the teeth, swollen tongue, the peculiar shaped face, great puffiness of both upper and lower eyelids, thin hair, slow speech, uncertain gait—she would stumble and fall, etc. She was put on thyroid extract (Burrows-Welcome) in five-grain doses three times a day. She rapidly improved, lost flesh; there was great desquamation of the skin of the feet and hands, etc. She has looked like another woman since; turned back the wheels of her clock, so to speak, fifteen or twenty years, so far as physical appearances are concerned. She has been taking one tablet of the thyroid extract every other day since then. The disease developed very rapidly when she was in Washington, due, I suppose, to the fact that she stopped all medicine I had given her, and she had an attack of malaria and a severe attack of diarrhea; she had only slight mental symptoms, but all the other symptoms were characteristic.

Her son is a very nervous, delicate boy. He has astigmatism; had adenoids; has a hernia; has soft bones, easily fractured; effusions in joints from slight injuries, etc.

Here are three cases, and neither of them had the marked nervous or mental obliquity upon which the books lay so much stress. In the last case reported the woman's pulse has never been below 100, even when not taking thyroid extract. She has never had a subnormal

temperature unless it was during the short time when the disease was at its acme.

Now, an interesting point to my mind is the family history. Her parents were Massachusetts people; they moved out here a long time ago, and had been living on one of our fashionable streets for a number of years. They have always had good doctors. The father died before I had any thing to do with the family. There were seven children, five of whom are living—four girls and one boy. The four girls have married; three of them are widows, one childless, the other two with a child each. The man has never married. The father died at the age of sixty-one, and was always an extremely temperate man, as far as smoking and drinking are concerned. He was a great lover of sweets, always eating maple sugar and maple syrup, which he would order by the wholesale from his old home in New England, and claimed never to have been sick. A year before his death he failed. The leading features of his last illness were excessive foaming diarrhea with hemorrhage from the bowel shortly before his death. Drs. Vandell and Hewett were his family physicians for years. After the death of Dr. Hewett I was called in. I attended the mother until her death. She died at the age of seventy-six years. She had had trouble with her hip, and Dr. Vance saw her at one time, and she was room-bound for a long number of years. She died with typical interstitial nephritis, but she had long before death, and as I remember the history ever since I was called into the family, rather a severe gastro-intestinal disturbance. She had a red, sore, cracked tongue at intervals, associated with a gaseous distension of the abdomen and diarrhea. She might be apparently well to-day, and after the slightest imprudence in diet would have the sore, cracked tongue, and the other symptoms mentioned.

I will also give you the history of another daughter: Another daughter older than this one married also an army officer, and has one child, also an army officer. She was a handsome woman. She now, I think, is going to have myxedema. She has a myxedematous spot on each cheek. She has the flabby appearance of myxedema; she has the muddy skin; I have been watching her for a number of years. The eyebrows are very thin. She has the tongue of her mother, always red, hardly ever any epithelial coating; nearly always within an hour or two after some imprudence in diet the tongue will become intensely red on its edges and sore; the buccal mucous membranes also become affected; she also has a colored spot coming near the outer canthus of

the right eye, followed by swelling and a bruised appearance of the lids; then will come the diarrhea. For the last four years she has had frequent hemorrhages from the bowel. She is now fifty-two years of age, and two years ago had bleeding from the bowel every day for several months. Two years ago I sent her away from here to Detroit, and thought she would not live to get back. She has hemorrhoids, but will not have them operated upon. She has no pain nor other disturbance from the diarrhea, any more than an uncomfortable sensation, then a gush of hot water, then blood. Last summer she went East, visited Fortress Monroe, and had malaria there. Then she went to New York and Brooklyn, and a doctor there made the diagnosis of cirrhosis of the liver and put her on very strict diet. She came back here in January, and has bled from the bowel almost to a day every month. When I first saw her, several years ago, I suggested the possibility that it might be vicarious menstruation. She said herself that it looked like the menstrual flow. She did not have any hemorrhages from the bowel until about the time change of life occurred. She said while absent last summer some lady who happened to know of the hemorrhages from her bowel told her not to be uneasy, that it was her menstrual period and she would be all right.

I have made a very careful examination and inspection. There is absolutely no enlargement of the veins of the belly or of the costal region; there is no ascites, no apparent diminution in size of the liver, no enlargement of the liver, and no tenderness anywhere. She is fond of sweets. Of course we know that hemorrhages from the bowel are frequently precursors of hepatic cirrhosis, and that hepatic cirrhosis is not always alcoholic in origin. Gastro-intestinal disturbances in the vast majority of cases, in my opinion, are more or less responsible for cirrhosis.

This patient was here to-day. Just thirty days ago she had a hemorrhage from the bowel. She was down town yesterday, went home bleeding, bled during the night, had to wear a napkin, bled some to-day, and had an action this morning. After making as careful an examination as I know how, giving her all the encouragement I could, I was unable to discover that the liver was any smaller than at my previous examination; there was no ascites, no venous enlargements, and she thought since the last bleeding (thirty days ago) that she was getting well. One night she ate a roll; the next morning she came over here presenting all the symptoms I have mentioned, swelling and

discoloration of the eyelids, sore tongue and mouth. This finally passes away, and just as soon as this occurs I look for a hemorrhage from the bowel. There is the trinity.

Now to the meat of the subject. Myxedema is more common in women than in men, six to ten times. It is far more common than we used to think. All cases of myxedema are not complete. Cases of myxedema may be inherited; there may be a family taint. I believe there is a family taint here. This last woman mentioned, if she lives long enough, will have myxedema. Myxedema is undoubtedly a complex of symptoms caused by changes in the thyroid gland, probably atrophic in character, preventing the thyroid gland from pouring into the circulation certain substances which have marked nutritional properties, especially in the nervous system. Now, are not all of these blood making glands, the ductless glands, glands with internal secretions, are they not all influenced by the condition of the alimentary tract? While we are apt to attribute too much to the so-called intestinal auto-infections, yet the fact must be recognized by the most careful that troubles of the intestinal tract may be very widespread. And may not this condition of the alimentary tract so marked in these three cases, and in this fourth supposed case, have largely to do with the progress of myxedema? In other words, instead of bending all our energy toward supplying the deficiency of the thyroid by introducing into the system something that is needed there, had we not better aid it by efforts toward intestinal antisepsis and proper feeding?

My experience with myxedema does not fit in with that of the books. I have long since ceased to expect that, and while every case is a law unto itself and an exception to the rule, yet there is a likeness sufficiently great to enable us to recognize the trouble.

Watching the second case over a series of eight years, I do not believe anybody would question the diagnosis. I have held it in check better with proper diet, proper eliminative treatment, the iodides, than I have even with thyroid extract. Is not our thyroid therapy of less importance than we have been inclined to think? Should we not supplement it with other things which seem of equal importance?

I present for your examination An Atlas of Clinical Medicine by Byron Bramwell, one of the best, I think, that has ever been produced, in which we find some illustrations of cases of myxedema. I show you one which is almost a counterpart of one of the cases I have reported, except some parts of the coloring.

In regard to the condition of the thyroid gland in these cases: I have had no difficulty whatsoever in making out an enlargement of the thyroid, but with a thyroid not enlarged or smaller than normal I must confess there is some difficulty in palpating it. I found the thyroid, I believe, smaller than normal in one of these cases, but in the other two there is so much myxedematous deposit in the clavicular region that I could not define it. Palpation of the thyroid gland not enlarged is not a very certain thing to me. I can detect it easily enough if there is a goiter, but in the average woman it is hard to make out.

Your attention is called to the fact that Bramwell lays particular stress upon the color of the skin in myxedema as a diagnostic point between this affection and Bright's disease. In the illustrations he gives, I believe the color is rather overdrawn.

Discussion. Dr. William Bailey: I am exceedingly interested in this subject, and thank Dr. Marvin for his presentation of it. While I am inclined to think that the thyroid gland is essentially a factor in the production of myxedema, yet I am prepared to believe that the gastrointestinal trouble which is so manifest in some of the cases reported should be closely looked into. We are often deceived very much as to the physiology of the ductless glands, and particularly as to the pathology—those conditions that come presumably by the failure of the secretions of these glands. It is almost positive proof that there is a failure of the thyroid in cases of myxedema, as the patient improves so manifestly and so rapidly under the use of thyroid extract. This is one of the most beautiful illustrations of the substitution of an artificial for a natural product, or of supplying the deficiency by means of animal secretions or extracts, in a condition that has developed from diseased processes. But I am inclined to think that we ought to look closely in these cases to the nutrition, as it might add to the difficulties coming from failure of the function of the thyroid gland. It may be that other conditions exist, and improvement in the nutrition in the way mentioned would be a factor. I can not understand, though, how either the thyroid or any of the other ductless glands, except the liver, would be concerned in hemorrhages from the bowel. That must be due to a condition of the intestinal tract, perhaps an inflammatory process, or some condition of the nutrition of the intestine which is not related, as I can see, to the thyroid, but is simply co-existent; it should be looked after closely by intestinal antiseptics, proper means of accomplishing better digestion in the canal as well as in the stomach. There

may be a failure in the nutrition of the patient, and I would certainly approve of the suggestion made by Dr. Marvin to always supplement the thyroid treatment by looking after the condition of the gastrointestinal tract. I do not believe myxedema is in any way related to Bright's disease, nor do I believe there is any close relationship between this disease (myxedema) and exophthalmic goiter, as the latter appears to be purely a nervous condition.

Dr. L. S. McMurtry: There is only one point to which I desire to allude, and that is the question of vicarious menstruation in the case mentioned by Dr. Marvin. The data he related are insufficient to prove that the bloody diarrhea is a substitution for the menstrual function. I am very skeptical about vicarious menstruation in any case. I do not know that I have ever seen an instance of vicarious menstruation, and am skeptical about there being such a thing.

Dr. J. G. Cecil: Personally I have had but little experience with the disease under consideration. I remember the second case reported by Dr. Marvin, but had no opportunity to study it closely, having seen the patient only twice, and had no chance to study the effect of any thing like a course of treatment. I asked the question a moment ago, which was answered by Dr. Bailey, with reference to the relation, if any, between the condition known as exophthalmic goiter and myxedema. Without being able to say why, I can not but believe there is a relation between the two diseases. I have had opportunity within the last four or five years to see a number of these cases, some of which have been very unmanageable, others which have given practically no trouble. I recall one especially, however, in a woman much younger than those detailed by Dr. Marvin, who developed exophthalmic goiter, and one of the features in the case was a diarrhea which came very near on several occasions being fatal from exhaustion. She has the peculiar complexion described by Dr. Marvin, and I have been looking for myxedematous development, but it has not come yet. She has improved from the exophthalmic trouble very much in the last two years that she has been under my observation. She now has practically little or no trouble.

The chief features in her case are great prominence of the eyes, rapid heart action, not much enlargement of the thyroid, and these attacks of diarrhea. She has a peculiar bloodless look not confined to the upper portion of the face; neither has it been of that waxy character, but a rather unusual sort of pallor. When she came here she was

a very beautiful woman, and many people remarked upon her complexion; her complexion to me, however, had something more than beauty about it. I have always been suspicious about it, and am still looking for and believe fully that I am going to see some myxedematous development in the case.

In regard to the use of thyroid extract, I must say that I am very skeptical about the benefits to be derived. The results I have gotten from it have not been satisfactory. The majority of the cases in which I have seen it used have been those of exophthalmic goiter, and it nearly always produced the disturbances detailed by Dr. Marvin, viz., gastric disturbance, flushing of the face, and disturbance about the heart.

Just now I have under observation an elderly lady who is exceedingly nervous, a typical neurasthenic, who has not the complexion of myxedema, but has a slight enlargement of the thyroid gland, especially the left side, and who is troubled a great deal with disturbance about the bowel; she was recently put upon the thyroid treatment by Dr. Kelly, of Baltimore. I do not know why he did so; it did not appear to me to be a case in which the thyroid extract was indicated, and it produced such disturbance that I had to withdraw it soon after she came here.

I believe the points made by Dr. Marvin and emphasized by Dr. Bailey in reference to care of the intestinal tract are very important. In the cases of myxedema that I have seen the patients did better under the use of thyroid extract when I could restrict their diet and watch closely the gastro-intestinal tract.

Dr. B. C. Frazier: I have seen a few cases of myxedema, but have had little experience in their treatment. I have not used the thyroid extract in these cases, but have used it in one case of obesity with excellent results.

Dr. F. C. Simpson: I am a little surprised at the remarks that have been made by some of the previous speakers. I recently read an article in a medical journal including a report of twelve cases of myxedema in which thyroid extract seemed to be a positive specific for this disease. It is a little surprising, if this report be true, that better results have not been obtained from this remedy in the cases treated here. Out of the twelve cases reported, seven or eight were said to have been completely cured, and the others greatly improved. I have had little or no experience with this agent, but was favorably impressed with the report to which reference has been made; and I have recently seen a

lady who has been in New York, and she said a doctor she had visited there was very enthusiastic over the treatment of myxedema with thyroid extract; he detailed a number of cases in which he had gotten favorable results and quite a number of cures.

Dr. Wm. Cheatham: I have seen several cases of myxedema. Dr. Ray will recall a case that we saw several years ago with paralysis of the abductors, with distress in breathing, in which an intubation was practiced. She wore the tube eighteen months or two years, and breathing was then perfect without it. She had a typical case of myxedema, and died afterward of this condition. This was before the days of thyroid extract. Her paralysis was from enlargement of some of the bronchial glands and pressure upon the recurrent laryngeal nerve.

I remember one of the cases mentioned by Dr. Marvin, and advised the patient to see her family physician. She went to New York and saw a young man who had just come from Germany, who made the diagnosis of myxedema. Dr. Marvin and myself had already made this diagnosis before she went to New York, but she said no one could make the diagnosis here.

I do not understand in cases where thyroid extract affects the heart, the skin, etc., why some medicine to counteract that part of the effect should not be administered.

Some cases have been reported lately of optic neuritis of a severe type from the continued use of thyroid extract in the hands of those who did not understand the action of the remedy. There is a medicine on the market now, a liquid thyroid made by Morgan, of Philadelphia, which gives us the active principle of thyroid, that can be given in ten or fifteen-drop doses. I think it is the active principle of thyroid in glycerine, and is prepared on a similar plan to the adrenalin, the active principle of the suprarenal gland in liquid form. It can be given hypodermatically. It represents 67 per cent fresh thyroid.

Dr. F. C. Wilson: I have seen several cases of myxedema in which I have used a preparation known as iodothyrene with very prompt results. One of the patients had considerable induration back of the knee, and it softened and disappeared promptly under the action of this remedy. I think there has been no return, though the lady moved away from the city and I lost sight of her. She was back here on a visit, but I did not think to make inquiry about the ultimate results, but suppose there had been no further trouble or she would have men-

tioned it. In another case induration was manifest under the chin. On two different occasions this has disappeared under the use of iodothyrene and thyroid extract.

I would like to ask Dr. Marvin if he has seen any notice of the engrafting of the fresh thyroid gland into the body for the cure of myxedema, and what have been the results? I have seen mention of this procedure several times, but have not followed it up to know whether any thing has been accomplished.

Dr. J. B. Marvin: I did not aim to exhaust the subject of myxedema, nor even to discuss it. The disease is more common in women than in men. Physiologists agree that the thyroid gland is physiologically more active in women than in men. Pregnancy, menstruation, coitus all excite this gland and enlarge it.

Referring to the point raised by Dr. McMurtry: I have not claimed that the hemorrhage from the bowel was vicarious menstruation, and did not mean to convey that impression. The woman herself believed this, and if she could get any comfort in thinking that this was vicarious menstruation rather than cirrhosis of the liver, I was willing.

The point I wanted to emphasize was the intestinal focus. All authorities put down hemorrhages, periodic or long continued, or excessive, as one of the exciting causes of myxedema. Cold ranks next, probably by lowering vitality, and possibly by checking elimination from the skin. Pregnancy, interference with nutrition, cold, and excessive hemorrhages occupy prominent points in the etiology and production of myxedema. I have thought perhaps one reason we did not see more myxedema here, which is common in some other parts of the country, is because it is not quite as cold; our people are better provided for as far as houses, clothing, and food are concerned than in some colder countries further north. The disease is practically unknown in Southern Europe and in the tropics.

Referring to the point made by Dr. Cecil: I think there is a connection between exophthalmic goiter and myxedema, in so far as both are possibly caused by changes primarily in the thyroid gland, and that exophthalmic goiter ought not to be considered a neurosis pure and simple. It is a neurosis, but a neurosis following pathological changes in the thyroid gland, and the changes in the gland may cause hyperplasia, excessive growth, over-stimulation, over-production of the thyroid principles, which produces the antithesis to myxedema where you have the gland destroyed, a diminished amount of secretion. Where

you have exophthalmic goiter, rapid pulse, etc., thyroid extract is contra-indicated.

I believe that a case may be myxedema at one time and exophthalmic goiter at another; in other words, one may follow the other. There may be an hyperplasia, over-production, over-stimulation, with the well-known symptoms following. If long continued, this may result in atrophy, shrinkage, and destruction, and you have myxedema as a second stage of the trouble.

Referring to Dr. Simpson's remarks: I believe that thyroid extract is the proper treatment for myxedema, and as far as my experience and reading go, I have seen good results from only two of these so-called animal extracts—thyroid and suprarenal. I believe in all typical cases of myxedema you will get the best results from thyroid extract. It is in those half-way cases (abortive), that progress so slowly and so gradually, that you get the least striking results from the thyroid extract: first, because the patient does not continue its use long enough, and probably, second, because you are not quite so enthusiastic in pushing it and can not point to as quick results.

Take those cases with that peculiar mental obtundity, the curious expressionless features, and administer this preparation and see the increase in mental capacity, the increased flexibility of the skin, the rise of temperature, lifting of the cloud from the brain, the shrinking of the swelling—all this is so marvelous, so remarkable, that both patient and doctor congratulate themselves on the good results. Now, I believe in those cases thyroid extract is well nigh a specific. I believe still further, if once started you have to keep it up for life. As soon as the remedy is stopped the symptoms return.

There is another point which should be emphasized: Thyroid extract is a cardiac depressant; you are handling a very powerful remedy. It is potent for evil as well as good. If there is valvular trouble or arterio-sclerosis, you have to be careful in its administration. I think a mistake is made in giving too large doses of thyroid extract. You had better give one dose a day rather than three, feel your way, and gradually increase the dose. If you are not getting the full effect from it, there will be no improvement in the symptoms, and I would rather have a thickening, drawn sensation about the lip, which the patient will complain of quickly, and just a little streak above the eye, rather than to push the thyroid extract to the point of exciting the heart. A quick heart is bound to be a weak heart.

In regard to Dr. Cheatham's question, I have not used the liquid thyroid. I have tried the different animal extracts, but have gotten striking results from only the two already mentioned. I have had no experience with iodothyrene, as mentioned by Dr. Wilson.

There is a close connection sometimes between myxedema and Bright's disease, and myxedema may give you albumen and casts in the urine. In myxedema the diagnosis should be made, it seems to me, by the peculiar thick, puffy, resisting, non-pitting swellings, swellings that do not exude fluid on puncture, but occasionally you find edema at the ankle and knee, and may get pitting on pressure. I have seen albumen in the urine in myxedema, but if you can rule out Bright's disease you can make the diagnosis easily by the characteristic swellings, especially in the supra-clavicular and supra-scalpular regions, and the flush of the face.

I have had no experience with engrafting the fresh thyroid into the body. Surgeons recognize the importance of leaving a portion of the thyroid gland in operating for goiter, etc., but the actual transplantation of the fresh thyroid I know nothing about.

A curious thing here is that whereas there is a close connection between these intestinal disturbances, the various nutritional and nervous phenomena, here is a preparation that you give by the mouth that runs the gauntlet of the gastro-intestinal juices and is still potent. It is some albuminoid principle that escapes destruction in the alimentary tract.

The action of thyroid extract in myxedema has led to its use in other skin troubles, as psoriasis, etc., with good results. I have used it in several cases of obesity, but have never seen any effect from it. It is easy enough to get the stimulating effects, but I have never seen any good result.

B. A. ALLAN, M. D., *Secretary.*

BRASHEAR MEDICAL SOCIETY.

The regular quarterly meeting of the Brashear Medical Society was held at Springfield on Tuesday, April 16th.

The following subjects were presented:

Dr. R. C. McChord, of Lebanon, had six pathological specimens, of which he gave a full and interesting history.

Dr. Ray, of Springfield, read a paper and had presented a clinic on muscular atrophy.

Dr. Wakefield, of Bloomfield, read a paper on arsenauro in the treatment of some nerve diseases, with report of cases.

Dr. Knott, of Lebanon, reported a case of diabetes in which he used antipyrine.

Dr. Wiley Rogers, of Taylorsville, read a paper on oxygen, giving the mode of preparation, effects upon the human system, and its therapeutic value, reporting cases of pneumonia, uremic coma, morphine poisoning, diabetes, and certain forms of neurosis where it had been used with success.

Dr. Blincoe, of Bardstown, read a paper on some questions regarding the danger of septic infection from certain remedies and methods in common use.

Drs. Rodman, of Bardstown, and Knott, of Lebanon, were elected members.

Drs. Rogers and Shepherd were appointed the committee on arrangements, essays, etc., for the next meeting, which will be held at Taylorsville, July 16, 1901.

Reviews and Bibliography.

Practical Hygiene. By CHARLES HARRINGTON, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Philadelphia and New York: Lea Brothers & Co. 1901.

Since bacteriology and antiseptics have taken such important places in the study of medicine, the teaching of hygiene as a separate branch of study in the medical schools of the country has become a necessity. This necessity has compelled teachers and students of hygiene to seek an adequate work on the subject. Heretofore the most of the works dealing with the subject in the way its importance demands have been the products of foreign authors and publishers. It is a pleasure to find in this manual an American text-book in keeping with the advance in medicine and the demands of the times.

An examination of the work shows the author thoroughly familiar with the subject, and that he has selected the topics with which every student of medicine should familiarize himself. There is only one subject of importance which has been omitted, the relation of climatology or meteorology

to diseases. Atmospheric changes with the conditions attendant thereupon are important factors in the treatment of some diseases, and ought to be of sufficient importance to receive attention in a separate chapter. The space given to disinfectants and disinfection, personal hygiene and the hygiene of occupation, is in proportion to their importance.

Hyde and Montgomery on Syphilis and Venereal Diseases. Second edition, revised and greatly enlarged. Syphilis and the Venereal Diseases. By JAMES NEVINS HYDE, M. D., Professor of Skin and Venereal Diseases, and FRANK H. MONTGOMERY, M. D., Associate Professor of Skin, Genito-Urinary, and Venereal Diseases in Rush Medical College, Chicago, Ill. Octavo, 594 pages, with 14 beautiful lithographic plates and numerous illustrations. Cloth, \$4.00 net.

In the present edition every page has received careful revision; many subjects, notably that on gonorrhea, have been rewritten, and much new material has been added throughout the book. With a view to better illustration of the subjects considered, a number of new cuts have been added and a series of beautiful lithographic colored plates. In its new and enlarged form the practical value of the book has been enormously increased.

The authors of this most excellent work need no introduction to the profession, and the last edition is fully in keeping with the good work done by them in the past. The book is well written, and is made practical in every particular. It is well worth the price asked for it, and we commend it to our readers as being one of the very best books of its kind, and predict a large sale for it.

Eichhorst's Practice of Medicine. A Text-Book of the Practice of Medicine. By Dr. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Translated and edited by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Price, per set: Cloth, \$6.00, net.

The Germans lead the world in internal medicine, and among all German clinicians no name is more renowned than that of the author of this work. Dr. Eichhorst stands to-day among the most eminent authorities of the world, and his Text-Book of the Practice of Medicine is probably the most valuable work of its size on the subject. The book is a new one, but on its publication it sprang into immediate popularity, and is now one of the leading text-books in Germany. It is practically a condensed edition of the author's great work on Special Pathology and Therapeutics, and it forms not only an ideal text-book for students, but a practical guide of unusual value to the practicing physician. As the essential aim of the physician will always be the cure of disease, the fullest and most careful consideration has been given to treatment.

Every page of this book bears the marks of a painstaking student and practitioner of medicine. It is one of the most thorough works on the practice of medicine that it has been our good fortune to see for years. It matters not how well a man may be posted, he can not read a page of this book without being the better for it. We commend it to every practitioner of medicine, and feel sure that it is one of the very best investments that can be made. It is in two volumes, and the price is so low as to enable almost every one to own it.

McFarland's Pathogenic Bacteria. Third edition, increased in size by over 100 pages. Text-Book upon the Pathogenic Bacteria. By JOSEPH MCFARLAND, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia, etc. Octavo volume of 621 pages, finely illustrated. Cloth, \$3.25 net.

Since this work first appeared, extensive progress has been made in the subjects of which it treats, making it necessary to increase the size of the book materially. The principal changes will be found where the advances have been most rapid, that is, under tuberculosis, diphtheria, tetanus, plague, etc. The article on infection and immunity has been entirely rewritten, many new chapters appear here and there, and much new matter has been added to the technic of bacteriology.

This work is thoroughly abreast with the times, and is one of the very best of its kind. It is especially adapted to the use of students and practitioners, and richly deserves the high esteem in which it has been held by the profession. The illustrations are among the best that we have seen, and render the book far more valuable than many works of its class.

American Text-Book of Physiology. Edited by WILLIAM H. HOWELL, Ph. D., M. D., Professor of Physiology in Johns Hopkins University. Volume II, royal octavo of nearly 600 pages, fully illustrated. Cloth, \$3.00 net; sheep or half-morocco, \$3.75 net. Philadelphia and London: W. B. Saunders & Co. 1900.

In reviewing Volume I of this work we took occasion to favorably comment on the splendid make-up of the work, and we take pleasure in reiterating the same of this volume. We wish to especially comment on the "Central Nervous System." The illustrations are all fine, and we will particularly mention the figure, No. 93, illustrating the sympathetic system.

Heretofore the attention has not been given to the anatomy and physiology of this system that it merits. But we are happy to say no such complaint can be entered here; on the contrary, an exhaustive consideration is given the subject.

We also call especial attention to plate No. 1, illustrating the parts of the ear. All the finer parts are made so plain that they can not but be of incalculable benefit to all students. This volume concludes with an admirable consideration of reproduction. Many new points are brought out, and all are thoroughly abreast of the times. At the end is a general index of both volumes, preceded by one of Volume II. Both volumes include all that is known of physiology, and that told in an admirable way.

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GENERAL ANESTHESIA.

Occasionally we are reminded of the fact that death from the use of a general anesthetic occurs, despite the greatest precautions that are taken to guard against such a distressing accident. The condition of the patient should always be carefully noted before the administration of the anesthetic, the heart's action especially. The anesthetic should always be administered with the patient in a recumbent position, and the stomach should be empty under all circumstances. The patient's clothes should be entirely free and loose, and so arranged that the anesthetist may at all times know the action of the chest and the respiratory muscles in general.

The anesthetist should always remember that he has no other duty to perform than that of getting the patient under the influence of the anesthetic and keeping him under it until the operation has been completed. He should always remember the important fact to note the surface circulation, as it is indicative of the general condition. He should also be careful not to let the patient fall into that inactive state which they sometimes do and cease to breathe, and he should remember the very great importance of permitting the patient to

breathe plenty of fresh air along with the anesthetic, and for this reason he must avoid using a towel or closed funnel; a flannel stretched over a small wire basket affords the very best means of administering an anesthetic.

The man who has never given an anesthetic, or who has never assisted in the administration of one on a number of occasions, is poorly fitted for such purposes, and would be unsafe as an administrator of a general anesthetic because of his lack of knowledge. The knowledge necessary to understand the administration of a general anesthetic can only be acquired by clinical experience; that is, the doctor, to understand the administration of a general anesthetic, must have given one himself or must have been with those who have given it a number of times, in order to observe the maneuvers of the patient under its influence, as they behave so differently under certain circumstances and conditions.

People exhibit their temperaments frequently while under the influence of a general anesthetic. The Irishman invariably becomes boisterous and manifests his pugnacious disposition. The Germans and colored people, on the other hand, frequently enter into the stage of full anesthesia without the slightest resistance. Again, they become somewhat hilarious, and often sing and pray. From this it will be seen that it is necessary to know the characteristics and nationality as well as the other conditions of the person who is to be anesthetized. In addition to chloroform the anesthetist should always have ether at hand, and see to it that both the chloroform and the ether are pure, that is, Squibb's best. Always have the necessary hypodermic loaded with strychnia. The choice of which anesthetic should be used is sometimes governed by the condition of the patient and sometimes by the knowledge possessed of one or the other of the anesthetics by the operator. Those persons who are suffering from kidney lesions, chronic bronchial trouble; that is, chronic bronchitis, are not fit subjects for the use of ether as an anesthetic, and for that reason the condition of the kidneys and the lungs should always be ascertained, if possible, before giving the anesthetic, and particularly in those cases where the persons are of the middle age of life or addicted to the use of alcohol, as those individuals are most likely to be the subjects of kidney lesions.

It should be remembered that chloroform is depressant, and while this is true, many persons who are nervous and have an irritable heart and pulse will quiet down under its influence and take it well, and often

with organic lesion of the heart chloroform may be safely given. However, if the heart muscles are weak, then the greatest care must be taken, or else the heart will become paralyzed under its influence if it should be pushed. The ether is undoubtedly a heart stimulant, and in its first action certainly has a tendency to force the blood from the heart out into the capillaries, thus relieving venous congestion. It will be seen in some cases that it is preferable to begin the anesthesia with chloroform, as in a person with an irritable heart, whereas in a person with a weak heart it is best to use ether. If the heart becomes weak the ether may be substituted for the chloroform. If the operator possesses a full knowledge of both ether and chloroform, he can use both as demanded. If he understands only the use of chloroform, he had better use that, and only use ether when it is absolutely indicated.

In the event of the appearance of a fatal result from the use of a general anesthetic, the question arises as to how long the efforts to resuscitate should be persisted in. We should certainly say from one to three hours. Be absolutely sure that the patient is dead before desisting in your efforts to resuscitate, and in your excitement do not forget the very great importance of rhythmical traction of the tongue in and out sixteen or eighteen times in a minute. This certainly is a means that should not be overlooked. We do not deem it wise to precede the use of the anesthetic by morphia or by the use of any stimulant, such as whisky or brandy. If the morphia is used, it may render the respiratory effort sluggish at the time when it should be most active, and the same is true of whisky or brandy, as the depressant effect of either of these may manifest itself at the most inauspicious moment.

WILL THEY REJECT TUBERCULOUS TEACHERS?

At a recent meeting of the trustees of the public schools of Louisville, Mr. Bruce Lentz introduced a resolution, the purport of which is to prohibit the employment as teacher in any of the public schools of this city a person affected with tuberculosis. This is a laudable movement in the right direction. There is no more effective way of spreading tuberculosis than to have a tuberculous person in a crowded school-room. On more than one occasion have we known a teacher in a public school, afflicted with tuberculosis, to remain at his post of duty until exhausted, breathing and expectorating poisonous germs into the

school-room. It is to be hoped that all cities will adopt this movement. While it may prove a hardship to a few, it will prevent the loss of many lives. This class of people ought also to be excluded from factories and other crowded places. They should be prohibited from places of public amusement and worship, and especially when such amusements and worship are held in crowded rooms or halls. This may seem far-fetched, but if we are to be rid of phthisis, as we ought to be, and as we believe we can be, at least ordinary precautions should be taken, and this is nothing more than ordinary precaution. A patient with smallpox would not be permitted in any of these places, and smallpox is not necessarily a fatal disease, while phthisis is, so far as we are able to determine at the present. It is the insidiousness of the "*white monster*" that makes us such an easy prey to his insatiable greed.

Current Surgical and Medical Selections.

PRIMARY SARCOMA OF THE STOMACH.—Mintz (*Berliner klin. Wochenschrift*, 1900, No. 32) reports a case of this kind, which, with those he has found in the literature and others overlooked by him but given in the report of Dock (*Journal of the American Medical Association*, July 21, 1900), raises the total to about fifty-five, including some not fully recorded. Mintz' patient was a man, aged thirty years, who for one month had complained of eructations, pyrosis, tugging pains in the abdomen, and increasing weakness. Vomiting was rare, and the vomitus without striking appearances. For a week before admission the symptoms were severe. Appetite was retained, but the patient avoided food on account of pain. There was rapid loss of weight. For some weeks the left testis had been enlarging. The patient was cachectic and jaundiced. There was a diffuse, firm tumor in the epigastrium, reaching almost to the navel, with a horizontal, movable, cord-like mass passing to the left. Lavage brought up abundant decomposed food remains, with blood at the last. Hydrochloric acid was absent, lactic present in large amount, with Oppler-Boas bacilli and no sarcinae. The diagnosis was carcinoma of the pylorus with metastasis in the testis. An operation for gastro-enterostomy showed that the tumor occupied the right half of the stomach. Death resulted in four days. Autopsy revealed adhesions between the pylorus and the liver; in the pyloric region a hard tumor the size of a fist, spreading out toward the fundus in a diffuse manner. The mucosa in the pylorus was the seat of an ulcer 2 cm. wide, occupying almost all of the circumference. The lymph glands in the lesser curvature were much enlarged, as also those in the hepato-duodenal ligament. With the exception of the testis, there were no other metastases. The growth

proved to be a lympho-sarcoma. The author gives a résumé of the clinical features of sarcoma of the stomach, and thinks it should be considered more frequently in the diagnosis of gastric tumors.—*The Amer. Jour. of the Med. Sciences.*

GNORRHEAL ARTHRITIS.—By Dr. F. Rubinstein (*Berlin Klin. Woch.*). The author reports eleven cases of gonorrheal arthritis as follows: Three of the knee-joint, two of the hip-joint, three of the wrist-joint, and one of the elbow-joint; also two cases of gonorrheal affection of the tendon sheathes.

In regard to therapy he states that gonorrheal hydrops is comparatively benign. Rest is necessary, combined with application of iodine, vesicatories, guaiacol-vasogen, or creosot-vasogen. When the exudate is very profuse, puncture and irrigation with carbolic acid or bi-chlorid of mercury solutions are indicated.

Bennecke recommends injection of five per cent carbolic acid; he has injected as much as eight grammes and allowed the solution to remain. He also recommends the same procedure in sero-fibrinous arthritis. On the other hand, as a rule, he advises against active treatment. In the fibrinous form he advocates rest, immobilization, elevation, splint and plaster dressings for the knee, foot, elbow, hand, and especially the hip-joint; free use of tincture of iodine, about twelve times in succession. On eruption of pus in the neighborhood, drainage of the joint, and, if indicated, resection are in order. He declares suppuration to be of rare occurrence—a statement which Rubinstein does not believe has been proven. Later, when the process has been arrested, he recommends active and passive motion, and when joint pain has subsided, massage and warm baths. However, not too much should be expected; finally, *brisement* and resection. In one of Bennecke's cases the ends of the bones were so firmly ankylosed that the natural lines of union of the bones could no longer be recognized. Of baths, he commends Gosten, Teplitz, Wiesbaden, Landeck.

Von Salzwedel recommends alcohol dressings, made by saturating cotton wool with ninety to ninety-six per cent alcohol; over this dry cotton is laid, the whole covered with some perforated impervious material so that the alcohol can evaporate. The dressing is changed every twelve to twenty-four hours; after subsidence of swelling only every two to three days.—*The Post-Graduate.*

OPERATIVE TREATMENT OF CARBUNCLE.—Madelung is an advocate of the operative treatment of carbuncle; he objects to complete excision, because it is a severe operation, attended with loss of blood, needless sacrifice of tissue, and a considerable scar; for several years he has been very successful with the following operation: The carbuncle is encircled on three sides by an incision (down to the muscle), forming a tongue-shaped flap, with the carbuncle in its center; the flap is rapidly reflected like the skin

flap in an amputation; bleeding is arrested by inserting a large pad of gauze between the flap and the bed from which it was taken, and applying pressure; with the sharp spoon all obviously dead tissue is removed from the deep surface of the flap, and the entire wound is disinfected; the flap is replaced over a pad of gauze, and a dry dressing is applied. After an interval varying from the sixth to the ninth day, the flap is united by means of sutures. It is said to be surprising how little of the carbunculous flap dies.—*Edinburgh Medical Journal*.

SOME POINTS IN THE TREATMENT OF SPINAL ABSCESSSES.—(British Medical Journal.) A. H. Tubby. The following points of treatment in cases of spinal abscess are emphasized by Tubby: 1. Do not wait to open a spinal abscess until the skin is reddened and involved. 2. As far as possible open the abscess at certain "seats of election," the places of evacuation to be decided by the direction taken by the abscess and by the surgeon. 3. Wherever evacuation is decided on, let it be done as far as possible away from the groin, and in such a position that more than one opening can be made into the abscess cavity. 4. Carefully cleanse the cavity and rub the interior thoroughly with menthol or iodoform solution. 5. Avoid drains of all kinds. 6. Be careful to carry out perfect aseptic measures from first to last. He enlarges upon these respectively. As regards the "seat of election" he mentions a case where by waiting the abscess enlarged in its femoral portion and outward from the abdomen under treatment by prolonged rest. This multiple opening was employed, with recovery. The importance of making more than one opening of the abscess and sac away from the groin as a cardinal point is emphasized in the treatment of these cases. Evacuation is likely to be more complete, pockets of pus not so likely to remain, and all parts of the cavity can be brought within reach of the sharp spoon, the irrigator, and the cleansing sponge. Applications to the sac-wall are also rendered more easy, and the greater the number of incisions that can be made without risk, provided they are all sewn up after the operation, the better will be the result.—*Journal A. M. A.*

Special Notice.

DR. RICHARD EICHE, of Cleveland, Ohio, writing, says: "It is doubtless of great value to the medical profession that we have a remedy at our command like Sanmetto. I have used this remedy with much success in irritation and inflammation of the neck of bladder, in prostatitis, in nervousness arising from irritation of uterus, ovaries, and testes, in incontinence of urine, and in old cases of gonorrhea and gleet. This remedy also powerfully influences the reproductive apparatus. It is here not my intention to waste space in pathological discussions, but will say that Sanmetto is a weapon in the hands of the physician, and a backbone to the worn and old of both sexes."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE NECESSITY FOR MEDICAL ORGANIZATION.*

BY J. N. MCCORMACK, M. D., LL. D.

Secretary of the State Board of Health of Kentucky; President of the National Confederation of State Medical Examining and Licensing Boards.

Although the American Medical Association has been in existence for over fifty-four years, and some of the State Societies even a little longer, only about one in ten of the medical men in this country are members of the former, and but one in three—chiefly confined to a few States and centers—are in affiliation with either their State or county societies. This bare statement of facts is a criticism of professional leadership and management which should be frankly met and honestly investigated. Your essayist believes that the reasons for this condition of affairs, so discouraging to those with high ideals, are not far to seek.

Taking our own State as a fair example, it may be truthfully said that no serious effort has ever been made at organization. It is true that all that has been done or attempted for the elevation and advancement of the profession, and the consequent good of the people, which are inseparable, has been in the right direction, but there has been little or none of that comprehensiveness and uniformity of plan or of concert of action between societies and individuals working with the same ends in view essential to the best results.

What is the condition of the average Kentucky doctor? Outside of a very limited number of counties it is neither an enviable nor an inspiring one, and this is as true of a very large element living here in Louis-

* Read before the Kentucky State Medical Society at Forty-sixth Annual Meeting, 1901.

ville as of those in the town and country districts. Suppose we take the experience of the recent graduate, or of either of you starting out in life, and make the application general. This will fairly epitomize the evils so widely prevalent. As a rule, he has left his half-equipped alma mater, where criticisms and ill-concealed misrepresentations of similar and better schools and faculties were in the atmosphere, none too well trained for his high calling and responsibilities, but ambitious to learn and craving the fellowship which he correctly feels and believes to be essential to practical knowledge.

His location chosen, he is fortunate if he is not met at the threshold, the most impressionable period of his medical life, with covert sneers or complete ostracism from those already established in practice. This hostility will be short-lived if he proves a failure, but will grow in virulence and threaten to become a consuming flame if he succeeds. With time he is likely to find that many of his professional neighbors, and especially those most intolerant, practically laid down their books at graduation; that they receive no new literature except the Brief and other free copy advertising periodicals; that they have little or no equipment for even the emergency surgery they must do, and that so much of their time is taken up with petty jealousies and bickerings as to destroy all real professional pride or proper desire for advancement. He will find them ready to quarrel about patients who would not pay either of them, or about provisions of the Code which neither of them have read; that one is afraid to collect his bills for fear the other will inherit some of his offended patrons; that ambition in surgery or other specialties is held in abeyance by the fact that those who should be his professional friends will send for consultation, or send patients to a distant town or city rather than ask his assistance, no matter what his qualifications may be; and that an unfortunate result after an operation, which might happen to any one, would be widely heralded to his discredit; in a word, that this curse of envy, which clings to our otherwise great and noble profession with such tenacity, and blights all to which it clings, tends to destroy his ideals, his happiness, and his usefulness.

Physicians need each other's advice, help, and upbuilding influence as no other men can do, and yet he finds that this spirit of contention, pitched upon the lowest possible plane, so infects and divides the people in nearly every community as to be utterly destructive of that public respect and confidence which all should co-operate to deserve.

With such environments the horizon of our graduate, probably never large, grows smaller and smaller with the years, until, unless he be above the average, he drops out of the race and becomes the unkempt and self-satisfied medical degenerate to be found on every hand.

It is mainly the condition so imperfectly described here which causes most of the poverty in the profession, interfering with it in every business aspect, just as the loss of public respect and confidence directly traceable to it, accounts for most of our difficulty in securing needed medical and health legislation, and in the enforcement of such laws as have been enacted. Dr. Jones and Dr. Smith may both be good men and reliable physicians, but if each of them confidentially informs everybody every day that the other is not only ignorant but dishonest, the community will finally agree with both of them and rate the entire profession accordingly. This picture is not a pleasant one, but, sincerely believing that these glaring and deplorable evils result from faults in our organization and methods which are entirely remediable, your essayist has painted what he finds, hoping that the defects may be cured and that some future worker in the same field may be able to paint a glorious counterpart, representing our great guild redeemed from its hereditary curse of envy and jealousy.

The segregated life universally incident to the practice of medicine has brought upon good and bad alike this Iliad of woes, and the only remedy which promises relief is such a systematic, all-pervasive organization, beginning with the county societies as the broad foundation, and extending up through the State societies to the American Medical Association, as will bring physicians together constantly. A strong effort in this direction has been under way in England and in several States of this Union for several years past, with promise of most excellent results, and the time has come when the profession of Kentucky must join actively in the movement or lose prestige.

As Chairman of the Committee on Organization of the Association, it will be my privilege to report a scheme for such an organization at the St. Paul meeting next month, which will, if adopted and carried out, attempt to reach and influence every medical man in this broad land. We will propose that the county society shall be the basis upon which the entire system shall rest, and that every member of his county society shall, without additional fee or application, become a member of his State society and receive its publications, with the privilege of attendance and participation in its proceedings, and of coincident

membership in the American Medical Association, if he desires this. In other words, we will propose that the county society shall be the portal to our entire society system, with no after-questions of one who is in good standing with his neighbors.

While every member of a county society will have the privilege of attendance on his State society, it is proposed that each county shall send one or more delegates to the State society, who shall, collectively, compose a "House of Delegates," and have charge of the legislative and all other material interests of the profession. Thus while the larger body is engaged in the reading and discussion of papers and other scientific work, as now, the small delegate body, representative and selected for this especial purpose, may devote so much of the entire three or four days as may be necessary to legislative and business matters.

Similarly, it is proposed that each State society, in proportion to its membership, shall elect representatives to the American Medical Association, who, collectively, shall compose its "House of Delegates," and sit during each annual meeting to consider the business and material interests of the profession of the entire country, while the various sections are doing the scientific work for which they were created. The membership in this business body of the Association will be limited to one hundred and fifty members, one half of whom will be elected annually for a term of two years, so as to make it a continuous body. In all of these bodies the house of delegates will act as the nominating committees, and, in order to effectually guard against political combinations, against perpetuation in office, and self-election to office, it is proposed that no delegate in any body shall be eligible to any office to which it elects. In each State society and in the Association this will give a compact business body, representative of the entire profession for which it acts, with ample time to consider all material matters, which are now slighted or ignored for want of time, without interfering for one minute with the much larger number of members who attend for scientific work only.

In such a scheme, that part of it which relates to the organization and maintainance of county societies, or an aggregation of counties in some sparsely settled districts, will be at once the most important and the most difficult. For obvious reasons, it has always been easy enough to have leading men attend and keep up the interest in the State societies and the American Medical Association, but the difficulties are greatly

increased when we come to face the problem of making the frequent meetings of local societies sufficiently harmonious and interesting to maintain the requisite attendance month after month and year after year. Yet this is done with most excellent results in some States, and in a few counties in all the States, and is possible everywhere. The difficulties are on the surface, and will disappear if frankly and courageously met.

In the first place, the dues should be so increased as to put ample funds in the hands of the State Society. Then some active young man, with tact and organizing capacity, who can devote his entire time to the work, should be employed for a few years to visit and systematically organize the profession in each county until the entire State has been covered. Scores of private orders and guilds with little apparent reason for existence are doing this successfully everywhere, while our profession, with interests not only involving every member, but the entire public as well, on account of a faulty system allows a large majority of its nominal members to drift along with no higher ambition than the mere means of subsistence.

With such an organization as is here briefly outlined all things that could be reasonably desired become possible to us, and through us to the people, for whom, as regards all protective sanitary and medical legislation, our profession must think and labor. The reform here suggested will require years of time, much patient and self-sacrificing effort, and no little expense, but no one who has given thought to the subject can question that the results to be secured are worth all of these. With a united profession we can easily guide legislation, State and national, into such channels as will accomplish most for ourselves and for our country, and at the same time give our great and noble profession that high place in the public estimation which, up to the present time, has been impossible because of defective organization and dissensions in our own ranks which are unworthy of us.

BOWLING GREEN, KY.

REPORT OF CLINICAL CASES.

BY M. F. COOMES, A. M., M. D.

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a Member of the American Medical Association and the Kentucky State Medical Society;
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and Kentucky School of Medicine Hospital, and Consulting Ophthalmic
Surgeon to Sts. Mary's and Elizabeth's Hospital, Etc.*

CASE I. Mr. L., of Albany, Ky., consulted me on the 8th day of April concerning his nose and face. The man was apparently in good health, well preserved in every particular for one of his age. Thirteen months prior to his calling at my office he began to have some difficulty in breathing through his left nostril. This became more and more difficult, until respiration through this channel was impossible. At that time he began to feel some discomfort in the jaw on that side, and finally the jaw became very painful, and all that side of the face. Later he noticed a lump in the roof of his mouth, which continued to grow rapidly, and became very painful as it progressed. He sought the advice of a doctor, and he in turn called a consultant. It was determined to cut into the tumor projecting into the roof of the mouth. This was done, with the result of not getting pus or fluid of any kind. The tumor continued to grow, and it was at this time he was sent to me. I found the left nostril entirely filled with growths which subsequently proved benign in character.

The entire left side of the mouth was filled up with the tumor, pushing the mucous membrane in front of it, showing that it had made its way through the hard palate. The upper teeth had been removed on that side, and the growth had extended in such a manner as to cover the free edge of the superior maxillary bone, the palate bone on the left side having been destroyed by pressure, as was subsequently determined by an operation. The tumor at this time was not painful; in fact, the man suffered but little pain aside from the mechanical disturbances produced by the tumor, namely, difficult respiration and deglutition; otherwise he was in perfect health; had a good appetite and slept well. The tumor was removed from the nose and examined microscopically, and, as has been said, presented no evidence of malignancy. Inasmuch as the tumor in the mouth had already been cut into, I determined to explore and ascertain its character, if possible. On the 13th day of April, at the Kentucky School of Medicine, under the influence of a local anesthetic, this was done. After the antrum had

been cleaned out a free communication was found between that cavity and the nose; the fluid injected into the antrum rapidly passed out through the nose. There was but little shock from this operation, and at the end of fourteen days he was placed under a general anesthetic. The line of incision was carried through the upper lip, following around closely under the nose and up by the side of that organ until it reached a point opposite the maxillary sinus, and another incision was carried from the angle of the mouth back toward the angle of the jaw sufficient to expose the bony surfaces on that side of the face. After exposing the tumor fully and upon critical examination at this stage of the operation, it was thought best to make a free incision into it and learn its nature. This was done, and the whole mass was removed with the finger, it being possible to shell it out. There was profuse hemorrhage during this part of the operation, and all of the growth was removed with the finger or curette. The tumor having been removed, it was easy to ascertain that the superior maxillary bone was not diseased, the tumor having originated in the antrum and grown to such proportions as to thin out the hard palate and make its way down into the mouth. From a clinical standpoint, this portion of the tumor had all appearances of malignancy; that is, sarcoma. After its removal the antrum and all the space occupied by the tumor were packed with gauze, and two or three stitches taken to hold the gauze in position; then the wounds in the face were stitched up in the usual way and the ordinary dressing applied. The patient suffered very much from the shock. The face-wounds healed by first intention. Forty-eight hours after the operation about two thirds of the gauze was removed from the antrum and tumor sac; on the following day the remainder of the gauze was removed. The cavity of the antrum and the nose were washed out each day with a solution of permanganate of potash, and then with carbolic acid. The man made a rapid and uneventful recovery, and the hole in the antrum was left open. When he returned home, May 27th, the opening leading into the antrum was large enough to introduce the finger, thus affording a free drainage. He had no difficulty in swallowing, nor did the food pass up into the antrum.

This is such a case as most of us are prone to turn aside as inoperable. I do not believe that any good surgeon would now attempt to remove the superior maxillary bone for the purpose of getting rid of sarcoma, for the reason that such operations have proved unsuccessful,

and in most instances the growth has returned with greater virulence and soon destroyed the life of the patient. I do think, however, that all of these people so afflicted, and especially when the cavity of the antrum is filled with a mass, as in this instance, deserve our most serious consideration, because it is possible to make them much more comfortable, and sometimes even prolong life. We find now some cases of sarcoma that have been operated upon where the patient experienced no return for three, four, or even five years, and often a longer time than that. In all cases we are justifiable in making them as comfortable as possible by surgical interference, if this is admissible.

CASE 2. Mr. R., aged sixty-four, of Bonnieville, Ky., was brought to me by Dr. Cessna for the purpose of examination and opinion. History: For more than twenty years there has been a growth in the right side of the neck posterior to the sterno-cleido-mastoid muscle. At the time of the examination it was about the size of a silver 50-cent piece. On the forehead over the left eyelid was a large growth, which had existed only about seven months at the time of his visit. It was more than an inch and a half in diameter, extending from the eyebrow almost to the scalp hair. It was rough on the surface, appearing to be superficial; that is, not extending further than the true skin. It bled readily. There had been nothing done in the way of surgical interference; a paste of some kind had been used on the forehead for the purpose of removing it. This had not been done by the attending physician, who recognized the fact that nothing but the knife would be of any use in such a case. After explaining the nature of the growth to the patient, and the method of removal, he was anesthetized and the growth removed by carrying an incision from near the center of the forehead down across the eyebrow to a point just outside of the upper lid to within one fourth of an inch of its free border. This incision was carried along the lid to the temple, so as to keep without the limits of the diseased tissue, and then across the forehead to the margin of the hairy scalp to a point where the incision was started. Within this inclosure was the tumor, with a good margin of sound tissue; it included fully one fourth of the cutaneous surface of the forehead. Every thing was removed clean to the temporal muscle, over which the incision extended to the rest of that space over the frontal bone, which was freed of every thing except periosteum. Having removed the tumor entirely, the first thing to be done was to stitch the skin of the eyelid so as to retain that portion of the cuticle

where it should be; then the wound was cleansed and the edges retained by sutures. When it was no longer possible to get the edges of the wound together, strong silk ligatures were passed through the edges of the wound, and their edges approximated as nearly as possible, and the wound dusted with iodoform and dressed with a compress. It was redressed in forty-eight hours, and was found to be in good condition. After this it was dressed from day to day. The edges of the wound that were approximated united by first intention, and continued to granulate rapidly from that time until recovery was complete. The growth on the neck was removed and the wound closed with sutures.

There are two remarkable things in connection with this case. Both growths were epitheliomas. The first was more than twenty years attaining its size, which is nothing unusual for growths of this kind. The second developed in seven months, which is unusual with epitheliomas. There are four brothers in this family, three of the four being afflicted with epitheliomas. Four days after the operation upon this patient I removed a small epithelioma from the external ear of his brother, and also a small one from his neck. These growths had not existed very long, the one on his ear for possibly two years, and the other for only six or eight months.

CASE 3. Mrs. E., aged sixty-four, consulted me on the 7th day of March, 1901, concerning her face and nose. The left side of the face was considerably swollen, and tears were constantly running over the cheek, and a constant flow of bloody mucus from the nose on that side. Clinical examination of the nose revealed the fact that the entire left side was filled with a soft mass, which bled freely upon the slightest provocation. Digital examination of the pharynx showed that while the growth did not extend down below the level of the floor of the nose, it protruded clear back to the posterior wall of the pharynx and up to the roof of the vault on that side. It did not extend over to the right side, nor was the right side of the nose involved in any way. The patient was in rather feeble health, and the appearance of the tumor indicated the possibility of its being malignant. A portion of it was removed and examined by Prof. John R. Wathen, who found it a benign growth. With these facts in possession, I determined to remove the tumor. Much to my astonishment I found it very brittle, breaking down readily under the curette, whereas I had assumed that it was a tough fibrous structure. The entire mass was removed at three sittings, at intervals of seven to ten days between

each sitting. The hemorrhage was very profuse, and it was only possible to curette away a portion of it at each sitting because of the excessive loss of blood. At the third sitting I was able to remove every vestige of the tumor, so that the cavity of the nose on that side was free in every particular. The growth had its origin from the middle turbinate bone. The site of the growth healed readily, and at present there is no evidence of its return. After the removal of the tumor it appeared that the antrum was involved, but this was most likely due to pressure interfering with the turbinated bones, both being pushed into the antrum internally. This is one of the few cases

FIGURE 1.

in which I have been able to remove every vestige of the growth from the nasal cavity without removing a portion or all of the turbinate bone. The after-treatment consisted in keeping the nose clean with antiseptic washes. In the intervals between operations the patient received a liberal diet of lean meat, milk, and claret wine every day at dinner, and iron after the meals.

The presence of the growth had not been actively manifested for more than eighteen months before its removal, although I am satisfied, from a general history given by the patient herself, and by her children, that it had existed for a number of years. Clinically, aside from the microscopical examination, the tumor presented all the appearances and characteristics of a sarcomatous growth. It was highly vascular, poorly organized, easy to break down under the curette, and bleeding profusely at each point of puncture. The case illustrates how easy it is to

be deceived in some instances by clinical manifestations. Probably the best thing to be done where the tumor has already made its way from the antrum through the bony cavity into the mouth or on the side of the face, is to expose the alveolar ridge if the teeth have been removed, or if not, remove them and push back the soft tissue and make an opening in the antrum at that point, breaking away the most pendant portion of the superior maxillary until the cavity of the antrum has been fully exposed. The opening should be made large, sufficiently so to introduce the index finger, and in this way free drain-

FIGURE 2.

age is afforded and free access is obtained to the cavity, so as to enable us to do what is necessary to be done in the way of surgical interference. This is a much better operation than the entire removal of the superior maxillary, and much less formidable in every particular, and the same if not better results are obtained. If by chance the growth does not prove malignant the mouth is not spoiled, and, on the other hand, if it is malignant you have afforded the patient all the relief that it is possible to obtain, and as much as if the superior maxillary had been removed.

CASE 4. Master G., aged thirteen years, was brought to me April 20, 1901, for the purpose of having a tumor removed from the right upper eyelid. As is shown in Figure 1, the tumor is an inch and a

half long, one inch wide, and fully half an inch thick. It occupied the space beneath the skin, covering the lid and mucous membrane lining that organ. Figure 2 represents the tumor in position before the operation.

The history of the case is that eight months ago, while at play, he received a lick on the eyelid from a companion. The lid became swollen as a result of the injury, but subsided with the exception of a slight enlargement, which never disappeared, but in a short time after the reception of the injury began to grow and developed into a tumor of enormous proportions, considering its position, in the very short space of less than eight months. The tumor was not painful, giving the boy no inconvenience aside from the sensation of weight attached to the lid and blindness produced from its position. The wounds were closed with silk sutures, the mucous surfaces being brought together first, and then the cutaneous surfaces were brought together in such a way as to have no dead spaces left. A compress was placed over the eye and allowed to remain forty-eight hours, at the end of which time the dressing was removed and the wound found to be perfectly clean. The stitches were subsequently removed, and the boy returned home and has had no further trouble.

The tumor was microscopically examined by Prof. John R. Wathen, and found to be small round-cell sarcoma.

LOUISVILLE.

THE STERILIZATION OF SUTURE MATERIAL.*

BY AUGUST SCHACHNER, M. D.

Professor of Surgery, Louisville Medical College.

The chances for the infection of a wound are greater from those bodies that are kept in contact with the wound for some time than from objects that are kept in contact but momentarily or for a short space of time. While it is important that all objects to which a wound is exposed should be at least practically sterile, it is highly imperative that those objects that are implanted in the wound for hours or days should be absolutely sterile.

For this reason our packings and suture and ligature material should command our utmost vigilance. Of the suture material we

*A paper read before the Kentucky State Medical Society, Louisville, May, 1901.

employ, the catgut gives us the most concern. The sterilization of catgut, especially the heavier varieties, is so difficult that for a time many believed that its absolute sterility was impossible. For this reason many operators, particularly on the other side of the Atlantic, have discarded and still discard catgut entirely. Silk has been substituted for the catgut because of its easier sterilization. The history of silk up to the time of its sterilization is a far cleaner one than that of catgut. In fact, if we consider the preparation of crude catgut, it is very remarkable that investigations should have demonstrated that the raw catgut is only occasionally infected with pyogenic organisms. For this reason, as several writers have suggested, most of the catgut has given satisfaction, even though its preparation for final use was of the most questionable nature. The bacteriological tests, and after all these are the only true tests, have not harmonized with the clinical results. The explanation for this discord is not a difficult one. We know full well that in every wound a certain number of organisms find entrance, and that the creation of a wound absolutely free of germs is an impossibility. With a more perfect knowledge of the infection of wounds and the conditions underlying the infection, we have learned to recognize that a wound containing germs is not an infected wound unless the germs which have found entrance into the wound have gained the supremacy in the struggle that always ensues in every wound between the entering germs and the opposing cells. For this reason catgut of a questionable nature from a bacteriological standpoint may be implanted into a wound without necessarily creating any disturbance. The opposing cells have been sufficient to destroy the organisms contained in the catgut, and all goes well. Should, however, the resistance offered the organism, either by reason of a general impaired vitality or because of some local condition, be insufficient to overcome the invading organisms, trouble will at once ensue.

We should not be satisfied with suture material that gives reasonable clinical satisfaction, but should endeavor to secure the material that will stand the most critical bacteriological tests. It would be somewhat surprising to one who had not investigated the subject to note the numerous methods that have from time to time been devised for the sterilization of catgut—a feature in itself quite sufficient to arouse a feeling of distrust in any of the methods. Dr. G. Brown Miller (Johns Hopkins Hospital Bul., Vol. XI, page 114), of the Johns Hopkins Hospital, has carefully studied from almost every standpoint

the more promising methods, namely, Schaffer's, Vollmer's (Formalin), Reverdin's (Dry Heat), Krönig's (Cumol), Sweetnam's, and from which the writer has freely borrowed.

This inquiry has satisfied this operator (Dr. Miller) of the superiority of the cumol method over the others. Catgut prepared by this method is superior, not alone from a bacteriological standpoint, but is stronger and more pliable.

In the cumol method, as modified by Drs. J. G. Clark and G. Brown Miller, the gut is cut into lengths of 35 to 40 cm. or rolled upon spools. It is then heated at a temperature of 85° C. for about two hours to drive out all moisture. According to Saul (*Archiv. f. Klin. Chir.*, Vol. 250, page 100), the average catgut contains 23 per cent moisture and 7.5 fatty matter.

The integrity of the catgut is largely dependent upon the thoroughness of its desiccation. If the catgut is not thoroughly dried before its exposure to a high temperature, it becomes brittle and useless.

After drying the catgut is transferred to the vessel containing the cumol and exposed to a temperature of 160–165° C. for one hour over a sand bath. It is removed from the cumol or the cumol is decanted, and the excess of cumol remaining in the catgut allowed to evaporate by leaving the vessel on the sand bath for one hour longer, the flame having been removed. The rolls of catgut are then placed in wide-mouthed sterile test-tubes, or the reels, if it is so arranged, transferred to their containers. Among the principal points which Dr. Miller mentions is to have an apparatus arranged in such a manner that the vapor of cumol does not come in contact with the flame or red-hot metal, since the vapor of cumol is heavier than air and is inflammable, but not explosive.

Such an apparatus has been designed by Dr. John G. Clark, of Philadelphia. Dr. Miller has still further elaborated upon this method by placing the catgut in solutions of formalin of varying strengths before sterilization, thus increasing the time required for its absorption.

The ligature reel herein described was designed to replace the glass boxes, which are generally considered the most aseptic arrangement at present at our disposal. This reel has not alone all the advantages that apply to the glass arrangement, but has some additional advantages, namely: being of metal, we are insured against its breakage, and for that reason never exposed to the danger of an accident to the ligature outfit. Not only this, but the durability of the metal

box is greater than that of a glass one. It is true that a glass box has a slight advantage over the metal one in looks, and for that reason the glass box may still receive the preference when it comes to hospitals.

It is in portability that the metal ligature outfit comes in for its full measure of advantage over its rival, the glass outfit. It is when we are obliged to operate away from hospitals, either in the city or especially in the country, and where we can not always judge the amount and character of suture material that might be called for, that we feel the need of an outfit that is practical in every sense, namely, portability, without danger of breakage, and liberal supply of all possible material.

Another need that this reel will supply is in military surgery, where a large amount of material can be safely carried.

Description of Reel. The reel can be constructed in different sizes; the most convenient for ordinary purposes is the one herein described. A cylindrical box $3\frac{1}{2}$ inches in circumference and $3\frac{1}{2}$ inches space in length. The box is supplied with a double cover to insure the greatest protection to its contents. The first, an outside cover, overlaps the case. The second, an inside cover, screws itself into security by means of threads cut into a strip that is soldered in the inside of the case about $\frac{3}{4}$ of an inch from the top. The edge of the inside cover is supplied with a narrow flange. When this cover is screwed into position this flange rests upon the strip, thereby doubly sealing the interior. The space between the covers measures $\frac{1}{2}$ inch. From the bottom of the case arises a stationary upright rod. This rod is flared out at the top so as to present a circular surface about $\frac{3}{4}$ of an inch in diameter. From the center of this surface arises a short screw, and radiating in a crucial manner from the base of this screw are found square excavations to receive the ends of the frames that hold the spools. These frames are held in position (*a*) by accurately fitting into the square excavations; (*b*) by being supplied with a small peg which fits into an aperture near the edge of the square excavation; (*c*) by being held in this square excavation by the impingement from above. This screw arising from the center of the disk surmounting the upright pole receives its mate, a form of thumbscrew, the bottom of which is flared out to correspond to the flared out top of the central pole. From this it is apparent that the purchase gained by this arrangement is similar to vise in its method, but far more effective in its mechanism. The frames that hold the reels are thus firmly held in position without the possibility of any wobble in any direction.

The spools slip into the slots with which the square frames are supplied. The spools are held in the slots by a very simple slide, which when in position closes the opening of the slot and prevents the release of the spool.

In unreeling the material (catgut or silk) it is drawn through a "V" shaped opening. The base of this "V" is rounded, giving the effect of a circular aperture, while the apex is drawn to a very slender point. While unreeling, the suture is drawn through the rounded base, and when a sufficient amount has been obtained it is drawn into the slender apex, where it is caught and prevented from falling away.

LOUISVILLE.

STERILITY IN WOMEN.*

BY LEWIS S. MCMURTRY, A. M., M. D.

Professor of Gynecology and Abdominal Surgery in the Hospital College of Medicine, Louisville.

In the entire scope of gynecic surgery I doubt if any subject has received more attention than sterility. The literature of the subject is vast and dates back to the early age of medicine. A review of this literature in conjunction with recent research will impress the scientific investigator with the unsatisfactory state of available and practical knowledge of the subject. This is due for the most part to the fact that sterility must be attributable to numerous causes involving numerous organs, thus rendering definite consideration of its pathology and treatment distinct from associated pathologic conditions impracticable.

The percentage of married women between fifteen and forty-five years of age who are sterile is estimated by various observers to be between seven and twelve per cent. Mathews Duncan placed the percentage at ten. With increasing population, the vast growth of cities, accumulating wealth, the pursuit of fashion, and adoption of artificial modes of life, this percentage is very much increased in the present age.

The importance of this subject in its sociologic, domestic, and kindred general relations and bearings, while recognized, are beyond the scope of the present occasion. Likewise the consideration of those congenital causes of sterility, or of those acquired defects in the reproductive organs, such as surgical removal of the uterus, ovaries, and

* Read before the Louisville Medico-Chirurgical Society, April 26, 1901. For discussion see page 425.

fallopian tubes, or permanent atrophy of these organs, is beyond the limits of this discourse.

Two necessary conditions must obtain for normal conception :

1. That the ovum and spermatozoa shall meet and fertilization occur. While this is believed to occur in the fallopian tubes, it doubtless can obtain in any part of the tubo-uterine mucous tract.

2. That the fertilized ovum shall find a proper nidus in the endometrium. The endometrium is the placenta-forming organ, which is the great center of force in the growth and development of the ovum. The endometrium must shed its epithelial covering, and its retiform tissue must become filled with lymphoid cells, from which the decidua must arise.

The function of menstruation and the coincident changes in the endometrium find their objective point in the preparation of a suitable nidus for the development of the fertilized ovum.

Excluding those general causes of arrested development, improper education and corpulence, the causes of sterility in women may be thus enumerated: Vaginismus, atresia of vagina, stenosis of the os, usually accompanied by deformity of the cervix (ante-flexion, conical cervix), uterine displacements, lacerations of cervix, tumors, inflammatory lesions of the peritoneum, ovaries, and tubo-uterine mucosa.

The two first causes above enumerated are obstacles to coition, can be readily detected by examination, and are amenable to well-known methods of treatment. Although stenosis of the os uteri and cervical canal is among the rarest causes of sterility, it is the assumed cause in almost every case which is presented to the physician for treatment. It is well known to every gynecologist that almost every case of sterility or delayed conception which comes under observation has previously undergone dilatation of the cervix for a fancied stenosis of that canal. The same criticism is applicable to the operation for sterility practiced by Simpson and Sims of incision of the cervix.

No operation is more misapplied than this one, and in a large proportion of cases it is the initial step in the establishment of chronic inflammatory disease of the tubo-uterine mucous tract. This statement may be emphasized when applied to those cases of sterility attributed to cervical stenosis in which the stem is applied to maintain patency after dilatation.

Inflammatory diseases of the uterus, ovaries, fallopian tubes, and pelvic peritoneum constitute the cause, in the great majority of cases,

of sterility, and the prevention and treatment of sterility is, for the most part, the prevention and control of infection of the tubo-uterine mucous tract.

The anatomical arrangement of the female genital organs makes it *a priori* probable that bacterial invasion plays a predominating rôle as a causative factor in all classes of inflammatory diseases.

Doderlein says: "Above any site in the body, the uterus seems to be the place favoring bacterial invasion and colonization. The open connection between the uterus, the vagina, and the outside world; the many chances for transport of germs which are so obvious, particularly during sexual life; stagnating secretions protected against desiccation and kept at a brood-oven temperature—all these factors unite to *a priori* impress us how well adapted the interior of the genitalia is for bacterial invasion and consequent disease."

Yet it has been found that in spite of all these apparently favorable factors the internal organs of the healthy woman are not easily reached by the pathogenic bacteria, and are, as a rule, sterile. The vulva, according to the unanimous verdict of all investigators, is frequently the seat of pathogenic bacteria, particularly the ubiquitous ordinary pyogenic micro-organisms. The vagina, however, in healthy women, contains pathogenic bacteria only in a small number of the cases examined under the proper precautionary measures to avoid contamination. It, on the other hand, in healthy women, always harbors a great many non-pathogenic bacteria. Yet fully virulent pathogenic microbes, introduced experimentally, as has been done by Koenig, Doderlein, and others, are speedily killed in the healthy vagina. Clinical and other experience has abundantly shown that the vagina possesses the power of self-purification, which may be speedily lost under certain conditions.

Adhesions, thickening and obstructive, so commonly resulting from inflammatory changes, may readily impede the passage of the ovum, while pathological secretions and inflammatory products may destroy its vitality. This cause of sterility is apparent in the large number of sterile women who have conceived once, and having been infected in connection with abortion, miscarriage, or labor, remain sterile in consequence of the changes resulting from inflammatory lesions.

Recurring to the researches and experiments of Doderlein, showing that under normal conditions the vagina has the power of self-purification through the power of its secretions, a practical means of prevent-

ing infection and consequent sterility is apparent. The modern idea that pervades the general professional mind, and adopted by the laity, that the frequent, often daily, use of the vaginal douche is a preventive of infection in healthy women is shown to be erroneous. The habitual daily use of the vaginal douche in health is productive of much mischief. The protection against infection established by nature is washed away; unskilled douching itself often carries infection to the cervical mucosa, whence it extends along the mucous surfaces. The vaginal douche, while a valuable agent in treating disease, is altogether misapplied as a routine part of the toilette or as a preventive of infection in healthy women. Many women are sterile in consequence of the inflammatory lesions begun in efforts to prevent conception early in their married life.

As a conclusion of this imperfect consideration of this subject, it may be stated that sterility may result from diseases involving any part of the genital system of organs, from the pelvic peritoneum to the vulva; that the most potent causes originate in the changes following inflammation. Hence, for the most part, the prevention and treatment of sterility in women is synonymous with the prevention and treatment of pelvic inflammation, one of the most elaborate chapters in gynecology.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting. April 26, 1901, the President, Louis Frank, M. D., in the Chair.

Uterine and Ovarian Fibroma. Dr. A. M. Vance: This specimen is a fibroid of the uterus, and what I take to be a fibroid tumor of the ovary, removed from a woman fifty-five years of age. She was strong, large, and full-blooded, despite the fact that she gives a well-authenticated history of having bled from the uterus for forty years.

I saw her first about a month ago, and found upon examination this fibroid tumor of the uterus wedged down tightly in the pelvis, and this additional pedunculated fibroid springing from somewhere in the left side. I took it to be a pedunculated fibroid, but upon opening the abdomen found the second tumor coming off from the left uterine horn

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

and attached by a small pedicle; running along the bottom of this tumor was the fallopian tube, the other side of the tube being attached to the sigmoid flexure of the colon. I first removed this tumor, and then enucleated the uterine fibroid, together with the uterus, after a great deal of difficulty, having to work close down to the sides of the pelvis. I finally succeeded in removing all but the uterine neck, and the woman is in a fair way to get well. Her pulse to-night is 80, temperature normal.

This ovarian tumor has cystic spaces in it, but is evidently a true fibroid. I take it to be quite a rare specimen.

Discussion. Dr. Louis Frank: I made a microscopical section of a part of the wall of this tumor of the ovary, and while I believe it is an ovarian fibroid, still it might be open to discussion simply on account of the rarity of fibroid tumors of the ovary. They are among the most rare tumors which we have in this region, being more rare than myomatous tumors of the ovary. What makes it more interesting from a pathological standpoint is the occurrence of these cysts in the tumor itself. The occurrence of cystic degeneration in ovarian fibroids, from what little study I have given the literature of the subject, seems to be an extremely rare thing. Some authorities state it may occur, though I believe there have been no cases cited where the question has been absolutely settled and positively determined; but it is believed that they will undergo this degeneration, cystic formation; and why I think this is a true fibroid is that in these cysts and about these cysts the tissue seemed to be infiltrated and softened, a condition which would precede the occurrence of these cysts. Ovarian fibroids of this size are especially rare. Probably the largest tumor recorded weighed six pounds. Kelly mentions a case reported by Schachner, of this city, a large fibroid of the ovary, weighing four pounds.

Dr. L. S. McMurtry: When this specimen was first presented I thought it was a pedunculated fibroid of the uterus, and it was only after examining it closely that I was persuaded it was not. It is the largest ovarian fibroid I have ever seen, and the anatomical arrangement of it in relation to the uterus and the fallopian tube seem to me conclusive that it is ovarian. Ovarian fibromata are exceedingly rare.

Dr. A. M. Vance: The most remarkable thing about this case is that the woman has maintained her general condition of robust health under

this almost continuous bleeding, and I take it this is due to the tremendous ability on her part to take food. She is a large, muscular woman, and has been able to work in the fields, doing a man's work, all these years without loss of strength, despite the fact she declares, and which is borne out by the evidence, that there has never been a time when she has ceased to bleed as long as nine days in forty years.

Splenectomy: Report of a Case. Dr. L. S. McMurtry: I have here a specimen which is of unusual interest to me. It is an abdominal tumor removed from a woman, aged thirty years, white, who has borne three children, and is exceedingly well nourished, rosy cheeks and lips, good digestion, and good appetite.

The characteristics of this tumor were unlike any abdominal tumor I have ever seen. When the patient would lie down for ten minutes the tumor would gravitate, as it were, toward the epigastrium and be above the umbilicus, and when she stood on her feet it would descend almost to the pubes. When the patient was lying down the tumor could be caught between the hands and carried all over the abdomen; it was as large as a man's head. It was undoubtedly cystic, as fluctuation was distinct.

After studying the case for some time I came to the conclusion that it was an ovarian tumor with a long pedicle, or that it was a floating kidney which was cystic. I did an abdominal section and found the tumor to be a cyst of the spleen. I tapped the cyst, and then removed the entire spleen. A portion of the spleen, as will be observed, is comparatively healthy in appearance; the balance was made up of a large cyst. The pedicle was formed of folds of the peritoneum. It will be remembered that the spleen is very loosely attached. The head of the pancreas was slightly attached to the healthy portion of the spleen. The operation was very easy; the vessels were secured and the tumor removed without the loss of more than a tablespoonful of blood.

I have not had time to look up the literature of this subject in a way that its interest and importance would demand, but I find the first splenectomy ever performed in England, for example, was by Sir Spencer Wells in 1865, resulting fatally in six hours. The first successful splenectomy was performed by Pean in 1867; so the entire subject is of comparatively recent occurrence. There is mention of a case occurring in the sixteenth century, but of rather doubtful character.

In so late a treatise as Dennis' System of Surgery, published in 1896, M. H. Richardson, of Boston, in an elaborate article on the subject of surgery of the spleen, had collected only eleven cases in which splenectomy had been done for cysts, and a number of such operations had been performed for hypertrophy, etc. This collection was made from the table of Hahn, and the mortality reported was eighteen per cent.

On January 18, 1901, Ashby, of Baltimore, reported to the Clinical Society of Maryland a case of splenectomy which is more like this case than any I have met with in a rather hurried examination of the literature. This was a case where he supposed he was dealing with a fibroid, and the tumor was impacted (incarcerated) in the pelvis. The woman had elevation of temperature at the time of the operation, which was supposed to be due to a twisted pedicle or some lesion of the tumor itself. He did a section, removing the spleen, and the woman immediately proceeded with four weeks of marked typhoid fever; five other members of her family were down at the same time with typhoid. Tests were made and every possibility of mistake eliminated, so the case was undoubtedly one of typhoid fever. The operation did not seem to complicate her illness, and she made a good recovery. He reported the case several months after her convalescence was completed, when she had gained twenty pounds in weight and was in excellent health.

Removal of the spleen presents the question at once as to how the economy will bear such deprivation. All that has been observed in the case reported by Richardson is, that there is for a time a diminution of the red blood corpuscles and an increase of the white blood corpuscles; after a time the ratio is re-established, and it seems undoubted that the spleen is an organ which is not absolutely essential to life or to normal health.

This patient had an attack of bronchitis immediately following the operation, which gave her a great deal of discomfort, cough, mucous expectoration, etc., which has since subsided; otherwise her convalescence has been just the same as if the operation had been done for simple ovarian cyst.

Discussion. Dr. A. M. Vance: I have never seen any trouble with the spleen of any patient upon whom I have operated. I have had two or three cases where I proposed to take away enlarged spleens, but the

patients would not allow it, and I am glad they did not. I consider the specimen shown by Dr. McMurtry a very remarkable one.

Dr. W. O. Roberts: Many years ago I saw the late Dr. Yandell open the abdomen of a patient for supposed ovarian tumor, which turned out to be an echinococcus cyst of the spleen. The spleen was not removed, but the greater portion of the tumor was extirpated, and the rest stitched to the abdominal wall with the view of causing its shrinkage.

Dr. James Vance: I made several microscopical sections from the specimen shown by Dr. McMurtry, and no micro-organisms were found. There was marked increase of the fibrous tissue of trabeculæ, but otherwise the organ, excepting the cystic portion, seemed normal. The pathology was not what I had expected.

Dr. S. G. Dabney: If I am not mistaken the usual teaching is that the spleen adds to the number of white blood corpuscles instead of the reverse, and it seems remarkable, if this teaching be true, that removal of the spleen should increase the white corpuscles and diminish the red.

Dr. Louis Frank: I believe the generally accepted teaching is that the spleen is the burying-ground of the red blood corpuscles, and I take it that the bone marrow must take on the function that is performed by the spleen after removal of this organ.

In recent lectures on abdominal surgery I have had occasion to run through the literature, and was struck with some of the statistics on surgery of the spleen. From the reported cases we can not judge as to the success of operations on the spleen. Many of these patients have died from hemorrhage, from retraction of the pedicle, and the results generally of surgery of the spleen have been very bad, excepting such cases as this, and in cases of knife or other wounds of the spleen. The most successful surgery of the spleen is done along this line.

At first sight this particular case would appear to be an echinococcus cyst, and it adds much to the interest of the case to learn that this is not true.

I believe the last statistics of Douglas, of Nashville, give six cases of cyst of the spleen operated upon with only two or three recoveries. However, the statistics of other operators show several cases of simple cysts successfully operated upon.

In closing the discussion I would like for Dr. McMurtry to state how the pedicle was treated; as to whether there was any trouble with

the blood-supply; how many ligatures he applied, and their character. In many of these cases death has resulted from hemorrhage from retraction of the pedicle.

The first successful operation for cyst of the spleen, if I remember correctly, was performed by Knowsley Thornton, of England. The results in those cases where we have leucocythemia are exceedingly bad; most cases die, there being only two or three recoveries in fifty or sixty cases.

Dr. L. S. McMurtry: As stated in my former remarks, my review of the literature has been very cursory, my attention not having been attracted to it before for some time. I intend later to look up the subject more thoroughly, and will then make a further report.

I ligated the pedicle en masse, which was not especially heavy, with a heavy silk ligature, and then with strong catgut ligatures reinforced that by tying the vessels separately.

Tumor of the Prostate Gland. Dr. W. O. Roberts: This specimen is a tumor of the prostate gland removed two weeks ago from a man of sixty-eight years, who had led a catheter life for the past five years. For the past six months he has had to use quite a stiff catheter, not being able to introduce a soft catheter further than the prostate—he could not get it into the bladder—but with the old-fashioned stiff instrument he could get into the bladder without any great difficulty. For the last six months he had used a catheter every hour or two in the twenty-four.

I did a suprapubic cystotomy and found the middle lobe of the prostate about the size of the first joint of my thumb; there was also quite a considerable sized tumor on the right side of the prostate. These I caught with forceps and removed with scissors. There was little hemorrhage following the operation, and the man has gotten along uninterruptedly well, but up to yesterday he had been unable to pass any urine whatsoever through the urethra. Yesterday he did pass a small amount, not enough, however, to empty the bladder. The bladder is still being drained through the suprapubic opening.

I reported to this Society several years ago the case of a man from Mount Sterling, Kentucky, a patient of the late Dr. Palmer, who had an enlargement of the middle lobe of the prostate gland which acted as a valve, and after I removed the enlarged lobe the man was able to pass his water as well as before.

The essay of the evening, "Sterility in Women," was read by L. S. McMurtry, M. D. [See p. 416.]

Discussion. Dr. A. M. Cartledge: The subject is one of great interest to all gynecologists; not so much, however, as in former times, for the simple reason that we are not called upon for relief of this condition as frequently as in older times. We are occasionally confronted by a woman who sincerely wishes to bear a child even at the present day.

The greatest interest, I take it, to the gynecologist is the fact that sterility is always a symptom, not a disease, and indicates that there is usually a lesion in the genital apparatus somewhere.

I have taken occasion to say in discussions and lectures upon this subject that for a man to scientifically address himself to the subject of sterility in women requires an appreciation of all the gynecological conditions we are called upon to treat, because practically every thing we are called upon to treat in gynecological disease is capable of producing sterility as one of the symptoms, although, remarkable to relate, we occasionally find an enormous array of gynecological conditions existing in the same patient and sterility is not a symptom in the case. That makes the subject of more interest in its study.

In thinking of sterility I am in the habit of considering the uterus as the middle ground; that we have the sperm cell to ascend to this middle ground and the ovum to descend. Any thing that prevents the descent of the ovum, or the ascent of the sperm cell, will cause sterility. Like Dr. McMurtry, I think the mechanical causes of sterility have been greatly exaggerated.

I have long since come to the conclusion that dilatation of the cervix rarely does good; it is the least effective of all the methods of treating sterility, and is the most commonly employed method. I have come to the conclusion that a cervical canal that will permit the escape of the menstrual fluid is not a barrier *per se* to conception. I have seen one instance where I thought a long cervix caused sterility, the sperm cells being placed at a disadvantage by being deposited in the upper portion of the vagina far beyond the cervical opening, and could not gain entrance to the long conical cervix. Aside from the so-called conical cervix with a small os, I do not believe a conical cervix is a barrier to conception. Of one thing I am satisfied, that the majority of cases are amenable to treatment. We should divide all cases into those beyond the pale of hope, and those that promise something from

the various methods of treatment. Of those beyond the pale of hope, infantile uteri and complete stenosis of the tubes are among the most common. Those rare constitutional and systemic conditions which have lithemia as a basis may sometimes be the cause of sterility. All the so-called mechanical and inflammatory effects I am satisfied will often be found very simple in character. I have had three cases of sterility which were caused by an endocervicitis with marked secretion of mucus, or a cervical mucous plug. In one of my cases the woman had been sterile for five years; she was anxious to have a child, and the mucous plug spoken of was the only lesion found. Applications were directed to the removal of this catarrhal condition, incising the glands in this situation deeply and turning them out, applying nitrate of silver, resulting in a cure.

I have never relieved a case of sterility by dilatation of the cervix, because I agree that this is not the cause *per se*; that some other obstruction must exist.

Of great interest, aside from the mechanical causes of sterility, and addressing myself more directly to the paper, is the question of the destruction of the sperm cells by toxins developed during the existence of certain inflammations in the genital tract; that this does occur in certain systemic taints there is no room to doubt. That is to say, there are probably given off during growth and multiplication of certain bacteria, toxins that immediately destroy the sperm cell; in cases where we can find no obstacle to the ascent of the sperm cell, nor can we find any mechanical difficulty in descent of the ovum, union takes place but fertility does not occur. To make it more reasonable to suppose there is something in the germs that give off these toxins is the fact that some women with quite a marked chronic endometritis conceive readily. Women, for instance, who have a chronic purulent endometritis, pus constantly coming from the uterus, sometimes conceive.

In regard to the question of lacerated cervixes: In women with large lacerations of the cervix that have healed, where the pavement epithelium lining the vaginal portion of the cervix has ulcerated and healed perfectly smooth, that woman is more liable to conceive than a woman who has had no laceration of the cervix. Yet when there is a laceration with granulation tissue and a chronic infectious process going on, the lacerated cervix may possibly be the cause of persistent sterility.

It is well to recognize another thing: It would be rash to promise any woman that you could cure her sterility. We must recognize that multiple causes of sterility may exist in the same individual, and these may all be amenable to treatment. One or two of the conditions may be amenable to treatment, the others may persist despite all our efforts at relief. Certainly a careful physical examination ought to detect any lesion; then if we have not an infantile uterus or an occluded tube, the case is hopeful. I believe in looking up the subject at one time I enumerated thirty-eight known causes of sterility, from chronic ovariitis, salpingitis, endometritis, down to the common one of slight infection about the cervix, endocervicitis, and on down to the vagina probably a chronic infection so that the sperm cells are killed at their first deposit. We must remember, however, that the sperm cells are possessed of considerable vitality, and it only requires six or seven minutes from the time they are deposited in the vagina until they have entered the cervix. But I can readily see how some women may have an infectious process in the vagina; that the toxins given off from such process might kill the sperm cells before they can gain entrance into the cervix.

One thing more or less theoretical that is an obscure cause of sterility is where we have a slight endometritis, a little sanious discharge from a uterus which is normal in size, the cervix not occluded, where there is no misdirection of the cervix as a result of development of the uterus, the tubes are patulous, the woman menstruates normally, yet conception does not take place. Such a woman may not come under the head of obese. In such cases it is well to start out, if we can find no other cause for the sterility, upon the basis that there exists a deficiency in this woman's blood, probably lithemic in type; that the endometrial secretion is so altered as a result of this systemic condition that there is a toxin given off, and immediately there is death to the sperm-cell of the ovum, and I believe that systemic treatment, change of climate, use of the various waters, etc., have led to conception in some of these women when all methods of local treatment had failed.

Dr. A. M. Vance: I would suggest that it might be well to examine the man in many of the cases of sterility in women; quite frequently in the man will be found the cause.

Dr. William Bailey: There are two or three points to which I desire to refer. The prevention of sterility, if I may use that expression, should be largely prophylactic, especially the preventing of such con-

ditions as obtain in our present state of society—conditions involving, no doubt, the healthy integrity of the endometrium. I am not concerned in the surgical features of the subject, recognizing that there must be sufficient patent condition of the tubes in order to bring the ovum down, and then there must be a living germ, so that impregnation may take place. I agree with the essayist that sterility is largely due to an unhealthy condition of the endometrium.

I am glad to hear Dr. McMurtry declare himself against the indiscriminate use of the vaginal douche. I believe it is now carried on to such an extent that even women in health are almost universally using the vaginal douche. Within less than three months I heard a conversation between a number of women, in which one of them stated, to the horror of the others, that she had never taken a vaginal douche. They advised her to go to a doctor, and he would send her home to have a vaginal douche for cleanliness, if nothing else. While it may seem to be a *quasi* means of cleansing, I am thoroughly of the opinion that the dangers from infection by the methods and means used, the uncleanness surgically of the ordinary douche apparatus, is such as to endanger the woman more than any condition for which it is used. I am growing more and more opposed to its use, unless it is necessary by already infected conditions that must be combated. The faculty that the vagina has of guarding the portal at this important place is a happy circumstance, and, for the most part, should be left to itself. The cleanly woman is one who takes care of herself externally, avoiding the introduction of germs as far as may be by cleanliness, but nature, in my judgment, can take care of the inside of the woman better than any means that we can adopt. We can all recall cases where we think, if I may be allowed to introduce this point in obstetrics, great trouble has come from the usual habit of a vaginal douche after labor. I am at that point in my obstetric practice that I absolutely prohibit the vaginal douche being used unless I find conditions that warrant it for infection already set up. I believe a woman is safer without any douching than she is with it, as the douche is ordinarily administered.

Dr. H. H. Grant: I do not feel disposed to discuss this matter as a gynecologist, because I have not given any special thought to it from that standpoint; but my views are a little different from those expressed by the essayist, and this is a matter which is more or less a question of general practice, one in which we are all interested to a certain extent, and all of us have some occasion to express an opinion. We

must accept the views of those men who have given the matter especial study, and who are competent to advise us, or else we should think for ourselves. It has seemed to me that not infrequently sterility is occasioned by a long cervix and displacement of the uterus, which causes occlusion of the lumen of the cervix by displacement of the uterus itself; and that not infrequently menstruation will occur regularly and practically to a physiological degree through this displaced uterus and curved cervix after much pain has been experienced in the gradual straightening out of the tube. The menstrual fluid does not apparently escape freely for the first few hours of the beginning of the menstrual molimen, but after six or eight hours, during which time the uterus has been replaced and the curvation of the cervix has been more or less effaced by the efforts of nature to empty the uterus, then menstruation apparently goes on normally. In the interval between menstruation, however, the uterus gets back into position, which is abnormal for other people but normal for this uterus, which practically occludes the cervix; and it has been my experience in three instances to have fertility succeed dilatation of the cervix by force in women who had, in one instance for several years, and in two other instances for a year each, been sterile. In each of these instances pregnancy succeeded the dilatation so promptly as to leave practically no doubt in my mind as to the fact that the dilatation had overcome the obstruction, and I reasoned with myself that the obstruction was of the nature that I have just endeavored to describe.

It has seemed to me, when I have had occasion to speak to this subject, that the chief causes of sterility are much as were suggested by Dr. Cartledge. I do not agree with him, however, in regard to the mucous plug causing obstruction and sterility; this plug is always present in the healthy cervix and offers no obstruction to the sperm. Obstruction, however, I think far more frequently the cause of sterility than any thing else, with discharges which in themselves are of an acrid character and promptly destroy the vitality of the sperm-cell. In addition to this, of course, is the further fact that the epithelium of the mucous membrane of the uterus is practically in many instances incompetent to retain the ovum even after it has become fertilized; or even in the tube itself there may be some obstruction which arrests the ovum out of reach of the spermatozoa. These, I think, are far more frequent causes of sterility than ordinarily believed, but the character of obstruction to which I have called attention is not an infrequent factor.

With respect to the vaginal douche, I have also entertained opinions about this which are different from those expressed by the essayist. They are based chiefly upon the fact that in women who are married, or in women unmarried in whom sexual intercourse is frequent, there is constantly introduced into the vagina an organ which is not sterile and exciting a secretion which practically is not a normal one, at least in the virgin, and perhaps in the original intentions of nature is not a normal one. We are all familiar with the fact that in every animal, aside from the human being, sexual intercourse was apparently intended by nature only for the purpose of procreation, but in the human being it is indulged in frequently by those who have license even without the object of pregnancy, and oftentimes persistently after pregnancy has occurred. As this is the case, then it appears that the condition found in the vaginal tract in other animal life is not the same as found in the human being. Most of us are aware of the fact that in those individuals who frequently indulge in sexual intercourse there is increased secretion of the glands in the male as well as in the female, and that only frequent ablution will enable those individuals to preserve a condition of absolute cleanliness of these parts. While it is probably true that in the virgin there is no need for the use of the vaginal douche where no disease exists, in the female who is the frequent subject of sexual intercourse I am satisfied there is an unnatural discharge, and there is an additional difficulty of cleanliness which can be preserved by the careful use of a clean vaginal douche.

The position taken by Dr. Bailey is one I fully approve; but the conditions are different here; the uterus is dilated, the cervix oftentimes large enough to admit a little finger, and not only is the fluid itself thrown in by the syringe enabled to effect an entrance into the uterus, but even the tube may find its way through the cervix, and here is a source of infection, as has been stated. But in the unimpregnated female the condition is different. The cervical tract is closed under ordinary conditions by a plug of mucus, and it is exceedingly difficult to get the fluid to penetrate it, and it is only by the incessant involuntary movements of the spermatozoa that they ascend into the cervix through this mucous plug. It is not necessary, however, that this plug should be removed to result in pregnancy; the spermatozoa may ascend by the side of it or even penetrate it. Their movements are not directed by any power on the part of the germ itself, but are involuntary and constant, and the life of the spermatozoa is sufficiently prolonged to

allow them to gain entrance to the uterine cavity. For this reason I am satisfied it is not easy to throw into the uterus any fluid that might be used in a syringe, or to wash into it any poisonous secretions that might be found about the vaginal walls.

With these exceptions I am fully in accord with every thing the essayist has said as to the character of the trouble, and I only regret that it does not appear from this description, or from that given by Dr. Cartledge, that we may hope for a great deal in the cure of these conditions.

Dr. F. C. Wilson: One of the causes of sterility not mentioned particularly by the essayist is the frequent efforts on the part of newly married couples to prevent conception; the use of douches of various kinds in order to prevent too early conception, as they term it. This too often results in sterility; in fact, I believe it is one of the prime causes. Of course this leads to inflammatory conditions, and the various changes take place as mentioned by the essayist, and the practice ought to be condemned. When people of this class want children they find they are unable to get them. Where a narrowed condition of the cervix can be detected by examination, sterility may be overcome by dilatation if that be the cause. That may not be the cause, but where a young woman suffers greatly from dysmenorrhea, and at the same time is sterile, a careful examination may detect a narrow cervical canal or a flexed uterus; I believe dilatation to a moderate extent—which would hardly amount to a surgical procedure, but, of course, ought to be done aseptically—will frequently overcome the difficulty and relieve the sterility. I have had cases of this kind where after the measures suggested were carried out conception promptly occurred, which was proof positive that the sterility had been relieved, and at the same time the dysmenorrhea completely disappeared. If there is a constricted cervical canal and conception occurs, nature does the rest in a much more perfect way than the surgeon can.

Dr. Louis Frank: I fully agree in every thing the essayist has said. The main point in the paper, a point that the essayist has thoroughly established, is recognized by all authorities to-day, viz: that sterility does not exist as a disease *per se*, or as a functional disorder, but is really due to some diseased condition—some pathological condition of the genital organs of the woman. I recognize, however, as I know he does, the fact that these lesions may be so slight in character, may be so obscure, so situated along the genital tract—about the ovaries, for instance, as

would follow an old gonorrhea—a pyosalpinx which may have subsided, leaving a condition which results in sterility, though we can not make out the cause by examination of the patient during her life. It is in many of these cases, for instance, where, without any demonstrable cause, sterility has extended over a long period of years in women who have been married fifteen or twenty years without any efforts at the prevention of conception, without any history of any mechanical lesion or pathological condition about the genital organs. Some of these cases have become at the end of that time pregnant and borne children. In these cases, if we could carefully examine pathologically the ovaries and tubes, we would find evidence of pre-existing disease.

I am perfectly in accord with what Drs. McMurtry, Cartledge, and Bailey have said in regard to the vaginal douche, and I certainly do not agree with Dr. Grant in this respect, nor in respect to displacements of the uterus *per se* producing sterility. These displacements may produce sterility secondarily by bringing about and maintaining a diseased condition of the uterus itself. There may be a secondary infection the result of catarrhal conditions, which we improperly term endometritis, not inflammatory in character, but which will prevent conception. These conditions do not necessarily prevent ovulation, but they do prevent the transplantation of the ovum on the endometrium and the development of the pregnancy. That there may be stenosis of the cervical canal to such a degree as to permit of the outflow of the menstrual fluid and prevent the entrance of the spermatozoa I can not conceive. We must remember that pregnancy sometimes takes place notwithstanding the presence of large tumors pressing upon the cervix and almost obliterating its canal; that ectopic gestation occurs in a tube where constriction is sufficient to prevent escape of the ovum into the uterus, still this does not prevent entrance of the spermatozoon into the tube.

In the cases mentioned by Dr. Wilson dilatation of the cervix was probably beneficial by producing alteration in circulation and thus improving the condition of the endometrium and permitting successful implantation of the impregnated ovum. In many women, and these would come under the same class mentioned by Dr. Wilson, the newly married, we have another element to consider, which is also true in the case of prostitutes, those who indulge in frequent sexual intercourse, namely, a congestion of the genital organs frequently

repeated which brings about a condition just as brought about by the cold douche; the uterus is chronically enlarged and congested, with alteration in circulation sufficient to prevent successful implantation of the impregnated ovum. I believe that frequently lacerated perineum will bring about the same condition, although this was not touched upon by the essayist. We also have to consider the open, flaccid vagina which permits the easy emptying of the seminal fluid and spermatozoa, thus acting as a factor in the production of sterility.

I hardly agree with Dr. Cartledge that the mucous plug in the cervix would be an active factor in the production of sterility. It seems to me the spermatozoa possess sufficient vitality and motion to penetrate or pass alongside of this mucous plug and find their way into the cervix; and where mucous plugs have apparently been the cause of sterility I believe the condition was actually due to hyperacidity or alkalinity of the secretions, which prevented the life of the spermatozoa being maintained sufficiently long to permit them to come in contact with the ovum to be fructified.

B. A. ALLAN, M. D., *Secretary.*

TREATMENT OF CARCINOMA UTERI.—Cullen, of Baltimore, gave before the International Congress of Medicine a summary of one hundred and seventy-six cases occurring in the Johns Hopkins Hospital during the last six years. Of these, seventy-three came too late for operation. Of the comparative cases, sixty-one were squamous cell carcinoma of cervix, twelve adenosarcoma of cervix, and thirty adenocarcinoma of body. Twenty-one per cent of the first group were well the first day of the present year; sixteen per cent of the second, and sixty-five per cent of the third. To avoid implanting carcinomatous into healthy tissue, he recommends the abdominal operation of Werder, which consists of the following steps: Removal of broken down carcinomatous cervical tissue, preferably a few days before; insertion of ureteral bougies if desired; ligation of ovarian vessels and round ligaments; freeing bladder from uterus and broad ligaments; opening of broad ligaments, location and freeing of ureters to points at which they enter bladder; ligation of uterine vessels near points of origin; dissection of bladder and of rectum free from vaginal vault; removal of pelvic lymph glands; freeing vaginal fornices; closure of pelvic cavity by uniting vesical peritoneum with that of rectum, an assistant meanwhile making strong traction on cervix from below; closure of abdomen; ringing of vaginal vault with thermocautery or knife, to free uterus and surrounding vaginal mucosa; application of light gauze pack to space left in vaginal vault.—*Denver Medical Times.*

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THE KENTUCKY STATE MEDICAL SOCIETY.

The forty-sixth annual meeting of the Kentucky State Medical Society was held in Louisville, May 22, 23, and 24, 1901. This meeting was one of the most successful in the history of the Society. The attendance was greater than at any previous meeting of the Society, except that which occurred at Danville when the McDowell monument was unveiled. Many things aided in bringing about this increased attendance. First of all, Louisville being the center, induced many members of the profession to attend who otherwise would not have done so. Secondly, the President is a very popular member of the profession and a classmate of many of the doctors in the State, and his personal popularity doubtless had much to do with the increased attendance. Thirdly, the efforts of the Secretary of the Society and of our Secretary of the State Board of Health no doubt had much to do with the increased attendance.

Dr. McCormack has been very persistent in his efforts to impress upon the profession of the State the great necessity for organization, and he has accomplished much good in this line of work. His address before the Society was upon this subject, The Organization of the Medical Profession of the State and Country in General, and it is a paper

that is well worthy of the consideration of every doctor who is interested in his profession.

Dr. McCormack has presented these facts and truths in such a manner as to enable a most obtuse individual to grasp them. On several occasions we have reminded our readers through the editorial columns of this journal of the great necessity for organization and of taking active interest in their profession, and we again call their attention to the great necessity of organized effort, and this effort can only be made through the medium of the various medical societies that are now in existence or may come into existence. As an evidence of the fact of the good work of the journals throughout the country and of Dr. McCormack's special effort in this State the membership of the Kentucky State Society increased over one hundred at the recent meeting, now giving the Society a membership of more than six hundred doctors.' While this speaks well for the profession of the State, there is no good reason why every reputable doctor should not be a member of this great Society. It is simply a matter of credentials and \$3.00. The prestige of the Society is worthy any man's consideration, and every right-minded doctor should bring it to his aid.

Current Surgical and Medical Selections.

CLINICAL EXPERIENCE WITH ADRENALIN.—By Emil Mayer, M. D., Surgeon New York Eye and Ear Infirmary, Throat Department; Fellow American Laryngological Association and of the New York Academy of Medicine, New York. Abstract from original paper in the Philadelphia Medical Journal, April 27, 1901:

The aqueous extract of suprarenal gland is perhaps the best culture medium known. Its instability, the involved method of preparation, its unsightliness, and the inexactitude of its various strengths tend to make us welcome a preparation that is exact, stable, and, above all, clean. Dr. Jokichi Takamine undertook the task of isolating the active principle of the suprarenal gland. He obtained a substance in stable and pure crystalline form, which raises the blood-pressure, and which he named "adrenalin." The author has used solutions of adrenalin chloride, 1 to 1,000, 1 to 5,000, and 1 to 10,000; his cases were all rhinological. Blanching of tissues followed the application of the strongest of these solutions in a few seconds, and was very thorough. In no instance was there any constitutional dis-

turbance. He has employed no suprarenal extract since for any purpose whatever.

The effect of the solutions was not altered by their change to a pink color; they were used for six weeks. Subsequently a small amount of chloretone was added to the fresh solutions, and now there is but slight change of color, and no floccules appear.

Thirty-five cases are reported in tabulated form, showing that the usual effect of the aqueous extract of the suprarenal gland was obtained. A few operative cases bled freely, but in every instance the hemorrhage was promptly checked by a second application of adrenalin. The adrenalin was used not only as hemostatic, but for the relief of nasal congestion, as a diagnostic aid, and for the continuous treatment of acute inflammatory affections of the accessory sinuses.

The author arrives at the following conclusions:

1. Adrenalin solutions supply every indication for which the aqueous extract has been used.
2. They are sterile.
3. They keep indefinitely.
4. Solutions 1 to 1,000 are strong enough for operative work; and 1 to 5,000 and 1 to 10,000 for local medication.
5. They may be used with safety.

In this connection it is interesting to note that E. Fletcher Ingals, M. D., of Chicago, also has had a very satisfactory experience with adrenalin. In a paper entitled "Notes on Adrenalin and Adrenalin Chloride" (Journal of the American Medical Association, April 27, 1901), he reports that he experimented with solutions varying from 1 to 1,000 to 1 to 10,000 of the chloride of adrenalin in distilled water or normal salt solution, and kept careful records until satisfied of its activity. In nine cases a very small quantity of a spray of one part of chloride of adrenalin to 10,000 parts of water was applied to the nasal cavities, with the effect of blanching the mucous membrane quickly, and in most cases causing contraction of the swollen tissues similar to that caused by cocaine. The first solution used was made with distilled water, and caused smarting; normal salt solution was then used as the solvent with perfect satisfaction. The smarting may have been due to the presence of a small quantity of formalin in which the atomizer had been washed just before use.

Experiments were also made with insufflations of a dry powder, consisting of 1.5 per cent (seventy-five parts) each of biborate of sodium and bicarbonate of sodium; 3 per cent (one hundred and fifty parts) light carbonate of magnesium; one part of adrenalin to 5,000 parts of sugar of milk. This powder cleared the nasal cavities when obstructed by swelling of the turbinated bodies, and diminished the secretions decidedly. A case of daily epistaxis was relieved by sprays of a 1 to 10,000 solution. Another of conjunctival congestion from overwork was entirely relieved by the instillation of a similar solution. The author has had equally satisfactory results in

cases of conjunctivitis, laryngitis, acute and chronic; acute laryngitis with edema glottidis, acute coryza, chronic laryngo-tracheitis with acute exacerbation, and in preparation for operations upon the nose.

In conclusion, the following results are presented: This remedy will be of great value in the treatment of acute inflammatory affections of the nasal cavities, either in sprays of 1 to 5,000 or in powders of 1 to 5,000, or 1 to 2,500, sugar of milk. In acute coryza and in hay fever, in epistaxis from various causes, in acute inflammation of the fauces, solutions of 1 to 1,000 will have good effects. In acute or subacute laryngitis solutions of 1 to 1,000, applied with moderate force, will give very great relief. It appears probable that vocalists may obtain sufficient relief from congested cords, for at least two or three hours, to obtain normal efficiency in the use of the voice.

In a paper read before the Chicago Laryngological and Climatological Association, W. E. Casselberry, M. D., called attention to the fact that adrenalin chloride solution is clear, colorless, odorless, sterile, and stable, if protected from heat, light, and oxidation; it is non-irritating to mucous membranes. When applied locally it exerts identically the same vaso-constrictor influence as the aqueous adrenal extract. Sprayed into the nostrils in the strength of 1 to 10,000, it produces a visible change from turgidity to compactness of the turbinated tissues, and a decided pallor of the mucous surfaces. In the strength of 1 to 1,000, or even 1 to 5,000, it has the power to limit hemorrhage during operations, and is an aid in the treatment of epistaxis. It may be substituted for cocaine in all cases in which an ischemic effect is desired; *e. g.*, to facilitate inspection of the deeper recesses of the nasal cavities and to make them more accessible. Adrenalin has little or no cerebral stimulant effect, exciting no desire for more of the drug, hence there is little to risk of habit-formation.

The author expresses the opinion that adrenalin should afford relief in asthma associated with bronchitis and vaso-motor paralysis, although he would expect little benefit from its use in asthma characterized by bronchial spasm. It may be formed into an ointment with vaseline or mixed with stearate of zinc, powdered starch, or sugar of milk, to make powders for nasal or laryngeal insufflation. The bibliography is very comprehensive, covering the literature of the subject down to the present date.

GONORRHEAL RHEUMATISM.—In an interesting account, based upon an analysis of 250 cases of gonorrheal rheumatism, G. Lorimer (*Quarterly Med. Jour.*, Nov., 1900) finds that the ages ranged from 17 to 58, and that by far the largest number of patients were males. This he explains is more due to difficulties present in recognizing the disease or the chronic discharge in females. The time from the onset of the gonorrhea to the occurrence of the arthritis averages three months in women and six weeks in men. An hereditary tendency to rheumatism was observed in so few cases as to be merely coincidental. Pyrexia was generally present, usually of subacute type, though acute and chronic cases were not infrequent. In two

instances the pyrexia was distinctly hectic in type. The absence of a tendency in the arthritis to shift from joint to joint was a characteristic feature except in those cases in which the initial fever was acute. The degree of pyrexia was observed to regulate the amount of perspiration and the concentration of the urine, and the peculiar acid odor of the perspiration of acute rheumatism was always absent. The absence of hyperinosis and oligocythemia was a fairly distinctive feature, but seemed to depend more on the degree of fever. Cardiac complications were rarely present. There was no evidence to show that previous attacks of rheumatism had any influence in increasing the liability to gonorrheal arthritis except in the acute type. The order of frequency of involvement of joints was as follows: Knees, ankles, hands, and wrists, hips, shoulders, temporo-maxillary joints, cervical joints, and sterno-clavicular joints. Other complicating affections were non-purulent conjunctivitis, scleritis, and iritis, neuralgia of the lumbar plexus and of the sciatic nerve, myalgia, and painful affections of the fasciæ, especially the plantar. There was generally noticed a much greater liability to chronic articular changes than in ordinary rheumatism. Muscular atrophy, usually proceeding *pari passu* with the arthritis, was occasionally observed. Salicylates only proved of value in those cases in which the onset was acute, in which case their efficacy disappeared with the advent of subacute symptoms. In conclusion the author asserts that the explanation of gonorrheal rheumatism is still *sub judice*, but he inclines toward the toxemic theory.—*Medical News*.

THE CAUSE OF ACUTE SPLENIC TUMOR IN CASES OF POISONING AND OF ACUTE INFECTIOUS DISEASES: PHYSIOLOGICAL FUNCTION OF THE SPLEEN.—G. Jawein (*Virchow's Archiv.*). Dogs were poisoned with potassium chlorate and with toluylendiamin, and the blood carefully studied by count and stained preparations until death occurred. The spleen was then examined microscopically. In every case in which the spleen increased in size the red blood corpuscles were reduced in number, and where the red cells did not decrease, the spleen did not grow in volume. The broken down red corpuscles were found in large numbers within the cells of the splenic pulp, and splenic hyperemia and hyperplasia ran parallel with the hemolysis. It appears, then, that in cases of poisoning the splenic tumor is due to the destruction of red blood cells whose products are heaped up in the spleen, where they cause an increase in the functional activity of the pulp cells. This increased function must of necessity be accompanied by hyperemia, hypertrophy, and hyperplasia. As the acute infectious diseases owe their organic changes chiefly to the poisons elaborated by micro-organisms, it seems rational to suppose that the splenic tumor occurring in such diseases is similarly dependent upon the destruction of the red blood corpuscles. In malaria, typhoid fever, recurrent fever, anthrax, septic diseases, and typhus fever the splenic tumor and the diminution in the number of the red cells occur coincidently; while in influenza both the blood count

and the size of the spleen vary greatly in different cases. On the other hand, diphtheria shows neither an acute splenic tumor nor a diminution of old blood corpuscles; nor do measles, varicella, dysentery, etc. In pneumonia the spleen is not enlarged, the red cells are slightly diminished, probably owing to the bloody exudation. It is an interesting fact that Matthes and Eichhorst declare that just after the crisis, that is, during the absorption of the bloody exudation, the spleen is enlarged. In the different forms of anemia, chlorosis, and leukemia, the presence of a splenic tumor would indicate the process to be one of blood destruction; its absence one of insufficient blood formation.

It seems very probable that one of the chief functions of the spleen is its action as a filter, more especially for the red blood corpuscles, in virtue of which the blood becomes cleared of broken-down red cells.—*Archives of Pediatrics.*

TREATMENT OF CONSTIPATION.—According to E. Roos (*Münch. med. Woch.*, October 23, 1900), one factor constantly overlooked in the treatment of constipation is the part played by the normal intestinal flora in producing free movements. Accordingly, the author obtained the coli bacillus from feces, grew it on agar, and filled the culture in gelatin capsules which were covered with collodion and keratine, each capsule containing one platinum loopful of the pure culture. Five such doses were given to several patients during five days, with the result that they were relieved from constipation for the following two weeks. Experiments with dead bacilli proved negative. The bacillus acidi lactici, employed in a similar manner, caused increased peristaltic action and flatulence, but hardly relieved constipation. The addition of sugar to the diet did not increase the action. The author then experimented with yeast, which has already been successfully employed in scurvy and furunculosis. Half a gram two or three times daily in keratinized capsules produced no gastric disturbances or flatulence, but on the second day or later the desired cathartic action. Dried yeast exposed to heat seemed to have an even more beneficial action.—*Medical News.*

UNUSUALLY LARGE URINARY CALCULUS.—Delore, in the *Gazette des Hôpitaux*, reports the case of a man over sixty who had presented symptoms of stone since childhood. On several occasions he had had attacks of retention, and for some months had had perineal fistula. Finally, a few days before he was seen by Delore he began to have a discharge of urine from the umbilicus. He died a few days later, the autopsy revealing a stone with cystitis and perforation of the bladder with infiltration of the urine into the subperitoneal tissues and a secondary perforation through the umbilicus. The chief interest centered in the size of the stone, which was 14 cm. in length and 8 cm. in diameter. It weighed three hundred and ten grammes (just about ten ounces). Chemical examination showed it to be composed of oxalate of lime.—*Albany Med. Annals.*

Special Notices.

THE psychological depressions and neuralgias so common in the period following a debauch are lessened or disappear altogether by the use of Celerina.

AN ADDITION TO OUR NEXT MATERIA MEDICA EARNESTLY RECOMMENDED.—For many years I have prescribed Sanmetto extensively, and I should assassinate truth were I to assert that, in a single instance, the results were otherwise than wholly satisfactory. There is not a form of genito-urinary inflammation wherein I have not used it. I can sincerely and earnestly recommend its addition to our next *Materia Medica*.

A. MAZETTA ROWE, M. D.,
Glasgow, Ky.

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The fact that the manufacturers of these palatable preparations use the purest and best Pepsin, and that every lot made by them is carefully tested before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

SPERMATORRHEA.—Having a case of spermatorrhea of several years' standing, which came under my care about nine months ago, I prescribed the usual remedies in this case, viz., bromide potash, ergot, ferrum, digitalis, belladonna, and cimicifuga, with very unsatisfactory results. Seeing your preparation, Celerina, recommended for this affection, I procured some, and administered it in this case with such marked results after the use of the first bottle that I immediately ordered two more bottles, which have entirely cured him of this affliction. I have two other patients now under treatment with Celerina which are progressing very favorably. After a practice of twenty-nine years I have no hesitancy in saying that it is the most effectual remedy that I have ever prescribed in the above disease.

H. E. RAUB, M. D.,
Quarryville, Pa.

A LABORATORY FOR POISONS.—It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids. Appreciating the importance of the command, "keep the bowels open," the physician will find in "Laxative Antikamnia and Quinine Tablets" a convenient and reliable aid to nature in her efforts to remove poisonous substances from the body. Attention is particularly called to the therapeutics of this tablet. One of its ingredients acts especially by increasing intestinal secretion, another by increasing the flow of bile, another by stimulating peristaltic action, and still another by its special power to unload the colon.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

TUBERCULOSIS OF CHILDHOOD.*

BY B. C. FRAZIER, M. D.

Knowing that such a large per cent of our population is tubercular, and that such a large per cent of our deaths is due to tuberculosis, I think it is not untimely to introduce the subject of tuberculosis in children.

Tuberculosis in children is much more common than one would suppose without looking up statistics.

Muller, of Munich, in 500 autopsies upon children, found tuberculosis in 40 per cent; in 30 per cent death was due to tuberculosis, and in 10 per cent tuberculosis was found to be present when patient had died from other disease. In 726 autopsies made in New York Infant Asylum, 6 per cent died from tuberculosis, and in 8 per cent tuberculosis was found to be present. In 319 autopsies made at New York Babies' Hospital, 14 per cent were from this cause.

The predisposition to tuberculosis may be general or local. The local predisposing causes are poor hygienic surroundings, poor food, feeble parents, either from tuberculosis, syphilis, or alcoholism; any of the acute infectious diseases, especially whooping-cough, measles, or epidemic grippe; repeated attacks of broncho-pneumonia, pleurisy, a catarrhal inflammation of the naso-pharynx, enlarged tonsils, or adenoids. We also are given to the expression, strumous diathesis, whether we mean scrofula or tuberculosis, or whether we use it synonymously as referring to a tuberculous diathesis. I find in looking

*Read before the Louisville Medico-Chirurgical Society, March 1, 1901. For discussion see page 462.

up the subject some authors make a differentiation and some do not. There are two types of children generally supposed to have predispositions to tubercular infection; first, the thin skinned, bright eyed, fine haired, with oval shaped face, prominent eyes, nervous temperament, unusually precocious, with long bones, flat chest, and tall for their years. This type was formerly supposed to be especially predisposed to phthisis. The other type is the round-faced, thick-lipped, flat-nosed, with distended nostrils and swarthy skin, this type being called scrofulous by older writers and more likely to show the glandular enlargements and be the subject of lupus and other superficial evidences of tuberculosis.

The question of heredity does not, since the demonstration of the infectiousness of tuberculosis in many of its forms, seem to play as large a part in the etiology as formerly supposed, though one can not but be impressed by the fact that heredity does seem to be a live factor in many cases. Out of 125 cases that I report, 46 have tuberculous family history, and but few have any history of direct infection. Still most of the authors give it a very deserving place, and I dare say most of the gentlemen present, with a case in question as to the correctness of diagnosis of a tubercular lesion, would allow a hereditary tendency to influence them in the affirmative.

That congenital tuberculosis is common can not be admitted, but that we do have congenital tuberculosis is sure. I have only been able to find one author who does not admit it. Huebner states that many cases which appear to begin in adult life date from an infection received in infancy. He asked the question, "How does the child become tuberculous?" and adds, "If it were hereditary, it would be far more common in infancy." He states that in a series of over 800 cases between one day and three months old, not a single one was tuberculous. Of 218 cases between ages of three and six months, 8 became tubercular, 3.6 per cent; between ages of six and nine months the percentage increased to 11.8, and between nine and twelve months it reached 26 per cent. Experimental pathology has shown that the period of incubation after direct exposure to tubercular infection is from one to three months, probably an average of forty days; that is to say, until you can demonstrate the macroscopic lesion in the lungs.

No cases occurring in the first three months in this series, he claims it is evident the nursling becomes tubercular by infection and not by inheritance. If this were the only literature on congenital tuberculosis,

we might accept that statement as a fact; but with such an array of evidence by other writers and observers, Prof. Huebner's statistics amount to but little. Experimental and clinical data have furnished us such a large number of cases in which there was proof of transmission of tubercle bacilli, through blood-vessels and lymph channels and through tissues, that the question can be no longer one of doubt. In the supplement to Keating's *Cyclopedia of the Diseases of Children* there is a case reported by Warthin in which there was ectopic pregnancy with tuberculosis of tubes, placenta, and fetus. Hochsinger has also, in the same article, reported a case of congenital syphilis and tuberculosis existing side by side in the same infant, thus affording an illustration of mixed infection in the fetus. Why tubercle bacilli pass through the placenta in some cases and not in others is ascribed to the condition of placental tissue. Some experimenters seem to think that the presence of alcohol in the blood favors the passage of germs.

Since Baumgarten formulated the doctrine of bacterial transmission from parent to offspring, much activity has been shown in this department of thought. Before the discovery of tubercle bacilli Baumgarten conceived that heredity of tuberculous disease was rather a transmission of the bacterial inciting factor than the inheritance of simple susceptibility of the tissues. Monti, of Vienna, cites evidence that the maternal ovum may be infected from the mother, or by the parental seminal fluid; later the embryo may be infected by the placental route or amniotic fluid when the mother is tubercular. He thinks this possible but very infrequent in practice.

Bar and Renon have collected blood from the umbilical vein in five cases, the children being born to tuberculous mothers. This blood they inoculated into guinea-pigs. In two of these cases, in which the mothers were far advanced, the results were positive, the animals dying with marked local tuberculosis, and also tuberculosis of the internal organs. The bacilli were recovered from the seat of inoculation in each case. Three of the cases were unsuccessful; in two of these the tuberculosis of the mother was mild, the other being severe. The children in these cases lived, and appeared to be healthy. In the positive cases, one died before birth, and the other died shortly after birth, of pneumonia. In the case of the dead child the inoculation of guinea-pig with a piece of the placenta caused tuberculosis.

Dr. Tyle, in *Philadelphia Medical Journal*, August 4, 1900, reported a case of a colored woman, far gone in phthisis, that had dated back

about two years, who had borne one child since she had been tuberculous. The mother died an hour after the child was born, and showed extensive tuberculosis of lungs and intestines at post-mortem examination.

The child was weak and only weighed three and a half pounds at birth, but gained for a few weeks, after which it began to lose, and died shortly. The temperature curve was characteristic of tuberculosis, and when the autopsy was made the lungs, liver, spleen, kidney, and bronchial glands showed tuberculosis. There was no other source of infection, and the author concludes that the infection must have come from the mother's blood. Lartigan, in speaking of sperm infection, stated the belief in this mode of infection is based on analogy, as experimental proof is wanting. All experimental evidence is against paternal transmission. Tubercle bacilli have been found in semen, and Jackle has reported several cases in which tuberculous semen injected into animals caused tuberculosis.

Sarwy cites a case of a healthy mother giving birth to a dead child, which had in its spinal column a tubercular focus that contained tubercle bacilli. He reported this case as one of paternal transmission. Baumgarten has reported a case in which he found tubercle bacilli in a Graafian follicle.

In infancy the natural resisting power against tuberculosis is very limited indeed, and parents and nurses have a grave responsibility in keeping infants and children free from exposure to tubercular infection. The laity have not yet been taught the extreme infectiousness of the disease, hence their seeming carelessness in protecting infants and children against this white scourge. Most parents and nurses would not for a moment think of exposing children in their care to any of the ordinary eruptive fevers, but they would not hesitate to take a baby in arms or a small child to visit a sick friend or relative suffering with consumption.

The most common mode, especially in lung and bronchial gland infection, is inhalation of the dried sputum. There is no better proof of this fact than that ninety-five per cent of primary infections is of the bronchial glands and lungs. There are many cases on record where direct infection occurred by contact with fresh sputum; three accounts where midwives had infected numbers of newborn infants by direct mouth-to-mouth aspiration of mucus, and then breathing into the nostrils of the same infants.

The rite of circumcision has frequently been a source of infection by a tubercular Rabbi officiating. We also have infection occurring through broken mucous surfaces of the mouth, such as lacerated gums, or a fresh cavity caused by extraction of a tooth, or by tonsillar inflammation. No doubt cervical adenitis and submaxillary adenitis are frequently caused in this manner.

Milk infection has been a question which has excited the thought and discussion of the profession and also the laity during the last few years. It has been looked upon as rather a dangerous source of infection where dairy herds have not been subjected to the tuberculin tests, and it is a well-established fact that infection does sometimes occur from the ingestion of milk, but to my mind it has been exaggerated. Tubercular udders are so quickly seen that a casual inspector would observe the malady, and without tuberculosis of the milk glands tubercle bacilli in the milk are very scarce; but even if present, sterilization would give immunity to a very large degree.

FREQUENCY OF THE DIFFERENT VISCERAL LESIONS OF TUBERCULOSIS.

Organs.	Personal cases ; 119 autopsies (chiefly under three years).	Pendlebury Hospital Reports ; 131 autopsies (chiefly over 3 years).
Lungs,	117, 99.0 per cent.	122, 93.0 per cent.
Pleura,	69, 58.0 " "	100, 76.0 " "
Bronchial lymph nodes, . . .	108, 96.0 " "	91, 70.0 " "
Brain,	40, 37.0 " "	60, 46.0 " "
Liver,	77, 65.0 " "	86, 65.0 " "
Spleen,	88, 75.0 " "	76, 58.0 " "
Kidneys,	46, 39.0 " "	54, 41.0 " "
Stomach,	5, 4.0 " "	1, 0.8 " "
Intestines,	40, 37.0 " "	65, 50.0 " "
Mesenteric lymph nodes, . .	38, 35.0 " "	77, 59.0 " "
Peritoneum,	10, 9.0 " "	37, 28.0 " "
Pericardium,	7, 6.0 " "	4, 3.0 " "
Endocardium,	1, 0.8 " "
Thymus,	3, 2.5 " "
Suprarenal capsules,	2, 1.7 " "	2, 1.6 " "
Pancreas,	3, 2.5 " "

The transmission of tuberculosis by food occurs generally when taken partially or entirely raw, as cooking destroys the bacilli. There is a case of tubercular meningitis reported, that seems to be authentic, in which the only way of infection appears to have been by the milk. The germs have been found in both cheese and butter, and there is an experimental case recorded in which a guinea-pig was infected by inoculation with butter, forty days old, containing the bacilli. Flies

are not uncommon carriers of tuberculosis, as they frequently alight upon or eat tubercular sputum, carrying the organism upon their feet from this to some substance taken as food by men.

Tuberculosis of the lungs causes the largest death-rate; the other lesions, save meningitis, do not cause nearly so many deaths. Meningitis is very rare in infancy, except when associated with pulmonary tuberculosis. Beginning with the third year, tuberculosis of bone, cervical and mesenteric lymph glands, peritoneum, and intestines is more frequent.

The cases I have tabulated show quite a good per cent with hip and spinal disease in the second year, and nineteen cases three years or under. This, I should say, is a greater proportion than has usually been supposed to exist. There is a very much larger per cent of bone disease in this series of cases than would be found in a given number selected from children whose age dated from birth. My series is taken from children more than one year of age, hence the greater number of bone over visceral lesions. It has occurred to me, in looking over literature on this subject, and recalling the fact that we can almost always get a history of some trauma preceding hip or spine disease, or even an articular osteitis, that it is not age *per se*, but the greater liability to traumatism (that is the exciting factor) as the child advances in years. Of course, an injury can not in itself produce tuberculosis in the bone, but if there are latent bacilli present the inflammation caused by traumatism makes a fertile field for the growth of the micro-organism.

The classifications of tubercular osteo-arthritis and tubercular osteitis given by different authors vary greatly. Tubercular disease of the knee-joint, hip-joint, and Pott's disease begins, as a rule, primarily as an osteitis; that is, the infection in knee-joint disease begins in one of the condyles, in hip disease in the head of the thigh-bone; in Pott's the seat of the initial lesion is in the body of the vertebra.

Clinically, it is very hard to differentiate those that begin in the synovial membrane and those that begin in the epiphyses, unless the patient is seen early and the symptoms well marked. At this time there is no overlapping, as in the later stages when all the tissues are involved. The exact location of the initial lesion in the joint does not matter. It is generally believed, though with this I am hardly in accord, that bone cases in general, especially in children ten years old or over, are like synovial cases, in that they are usually secondary lesions, primary infection being in some of the glands or viscera of the body.

According to Kummer, other and older foci than that in the bone are found in 60 per cent of the cases—in the lungs 25 per cent, in other joints and bones 20 per cent, in lymphatic glands 10 per cent, and in the pleura 2 per cent. In tuberculosis of the lungs we find glandular involvement in a very large per cent, and the superficial glands frequently suppurate; that is, the cervical and submaxillary, while in bone disease the glandular involvement is not nearly so frequent, and they are not so apt to suppurate even if there is an enlargement. They seem to become encysted, caseation taking place, and they remaining in a stationary condition for a long time.

The intestinal tract is not frequently involved in very young children, because the invasion of the lung-tissue and the meninges is so rapid that the child is overcome and dies before an infection in the abdominal viscera can be very great. The stomach is practically never diseased from this infection, not because of any influence the gastric juice may have on the bacilli, because it has been shown that the organism can resist the action of the gastric juice five or six hours. However, the intestine is much more frequently involved. The only way to bring the microscope to aid in these diagnoses is to examine the feces, and it is not a very easy or satisfactory process, unless there are large masses of the sputa present in a well-formed fecal mass.

One writer advises the use of opium to constipate the bowels so we may have a hard action, so as to rub off the bacilli from the walls of the bowel, the thin action not being likely to bring them away.

Many of the processes are very easily made out by the history and the clinical aspect of the little patient. But pulmonary tuberculosis is frequently very difficult to diagnose, not only because it is hard to elicit a true history, and one that will give you a correct bearing upon the case, but also on account of the insidious onset of the disease, it resembling typhoid fever, malarial fever, or one of the anemic types of disease frequently seen at this age.

The onset of pulmonary tuberculosis and typhoid fever is frequently so alike that it is very hard to make a differential diagnosis. The general malaise, the fever range, the frequent loss of appetite, the digestive disturbance so characteristic of both are very puzzling unless you can secure a history of a previous exhaustive attack of some of the diseases so common to children, and can not get any history of typhoid in the community; and it is to be remembered that children in second and third year seldom have typhoid fever. The Widall test should also be

a helping hand to these obscure cases. The presence of cough and the absence of rose-colored spots would justify the diagnosis of pulmonary tuberculosis over typhoid fever.

	Cases.	Per cent.
Spine,	2,145	37.5
Hip,	1,937	34.0
Knee,	1,222	21.5
Ankle and tarsus,	255	4.5
Elbow,	71	1.2
Wrist,	50	0.9
Shoulder,	24	0.4
Total,	5,704	100.0

"Auscultation reveals no special symptoms beyond moist disseminated râles, or occasionally a souffle, and a diagnosis is made of bronchitis or broncho-pneumonia. Young children do not expectorate, and are but rarely subject to hemoptysis, yet it may happen that blood comes from the pulmonary vessels and reaches the throat, when it is usually swallowed, to be later vomited or passed off in the feces. Hemoptysis in this case would be masked by hematemesis or malena. The pulmonary hemorrhage must be of great importance to cause an immediate hemoptysis. In young children pulmonary tuberculosis is rapid in its course, terminating in a few weeks, this being largely due to the fact that its regular course is interrupted by the involvement of other viscera, especially the cerebro-spinal meninges. Prognosis is grave, a recovery being well-nigh impossible."

Pulmonary tuberculosis may, in very young children, take on the aspect of broncho-pneumonia. We must take note of the predominance of râles at the apex, and the presence of small, indurated ganglia in the neck, axillæ, and groins. Diagnosis is often difficult in both acute and chronic cases. I have seen some in which every thing pointed to broncho-pneumonia, and in which at the autopsy tuberculosis was found.

In older children intestinal tuberculosis is not frequent, and ulceration of the intestine is always followed by enlargement of the mesenteric glands. Some author has said that children having clubbed fingers are likely to have bone disease or congenital heart trouble, but in the great majority of cases there existed an empyema, hence the necessity of a careful examination of the lungs, which should always be made. I consider clubbed fingers (and toes) a very important point in the diagnosis of tuberculosis, as I have never seen a club-

fingered child that was not tuberculous; the empyema that the author speaks of is more than likely a tubercular empyema.

The diagnosis in bone disease is frequently very difficult. One of the important points in diagnosis is the gradual onset of symptoms, the most characteristic of which are lameness, darting pains at night, and the impairment of all the functions of the joint or spine, as the case may be. The chronic character of the disease should constantly be borne in mind; the more chronic the disease the more surely is it tuberculosis.

In the early stage hip disease may be confounded with strain of the joint, rheumatism, poliomyelitis, phlegmonous inflammation in the neighborhood of the joint, or with caries of the lumbar spine.

In the second and third stages the diagnosis is comparatively easy; deformity of Pott's disease is not likely to be confounded with any thing except rachitis, kyphosis, or rotary lateral curvature. Before there is any deformity, stiffness in the spine is a good point in diagnosis. If there is no history of acute trouble, lack of the power to bend forward or backward, coupled with pain and general malaise, is usually enough to warrant a diagnosis of Pott's; provided you have had an intelligent history. I can not go into detail as to treatment, either in these bone cases or visceral or glandular ones. The bone cases run just about as chronic course in treatment as do the ones of other lesions. The first indication is to stop the deformity and to increase the nutritive power. A few of the orthopedic surgeons are correcting the deformation both in spine and hip disease, or trying to do so. There is only a limited class of cases that can be expected to yield a good result to this treatment.

Considering drugs in general treatment, tonics are first indicated, and the ones that are best borne by the stomach probably are the ones of most value. Hypophosphites seem to meet the demand in a larger per cent of cases than any thing else. During the winter months cod-liver oil is especially indicated, and I think is really better borne than in the warm months. Creosote seems to have a prominent and deserving place in the treatment of most all the different types of this disease. Cardiac tonics are not to be overlooked, as they are very important in keeping circulation near to normal.

G. Champion, in discussing the immobilization of the chest, states that this treatment is of extreme value when used in conjunction with dietetic and hygienic treatment.

Silver nitrate injection into the neck is one of the latest methods of treatment. I believe it was formerly injected only on the side of the affected lung, but I see it recommended to inject on both sides, as the results are better. Inhalation treatment meets some conditions and frequently gives much relief.

The enumeration of drugs that are used in the treatment of tuberculosis, and those that are claimed by some to be especially valuable, some even being a specific in the early stages, would be almost an endless test.

Until we have found a specific or an immunizer we will have to go on as we always have, that is, to do the best we can to combat the symptoms as they arise, and to nourish the patient as best we can with the best food and nourishment that can be obtained.

Milk and eggs have long held the first place among foods, and milk being essentially child food, there is nothing that can replace it. Many of the artificial milk foods are well prepared and have their value as a food in cases where the mother's milk can not be used, or where cow's milk can not be obtained.

Whisky is one of the most valuable agents (food, if you please) in treatment of general tuberculosis in infancy and childhood; it really seems to take the place of food to some degree, and it is a great stimulant to the appetite and aids digestion. Fresh air, either salt air or the air of the pine mountain, seems to be very helpful in the majority of cases.

LOUISVILLE.

SURGICAL EMERGENCIES FROM A MEDICO-LEGAL STANDPOINT: AN AUTHENTIC CASE.*

BY C. C. GODSHAW, A. B., M. D.

The title of this paper, you will observe, is different from those usually read before medical societies.

We meet annually to help, aid, and instruct each other in various ways, and my object is to show how, upon a legal technicality, a large fee was deservedly earned, yet lost, in an emergency surgical case, in the hope that, from my experience, you may gain a valuable lesson and govern yourselves accordingly. More particularly I desire to call the attention of the general practitioner to the fact and precedent estab-

* Read before the Kentucky State Medical Society, Louisville, May 24, 1901.

lished by the wise Solons of the law who have ruled in this case, that the foreman of a factory or corporation is only recognized as a special agent, employed for a specific purpose, and is not authorized by law to employ a surgeon in emergency cases and obligate his employer or the corporation for the services so rendered. Doctors, in general, are not business men, and I am satisfied the majority are blissfully ignorant of accepted and recognized legal facts. Therefore, it is very important to remember that a doctor, in bringing suit for collection of his just dues for faithful and skillful attention to employes of a factory or corporation, is not allowed to testify, if the debtor or appellee be dead, although the latter told me he would pay me, and, also, that no expense should be spared to save the life of the poor and unfortunate man, Schnable, whose case I shall briefly report, with criticisms from a medico-legal standpoint, and also read in full the opinion of the Court of Appeals of Kentucky bearing upon this suit.

You can easily see that the writer was put to no little expense, worry, and annoyance, and all I got for my trouble was a valuable lesson, some rich experience, and the immortal glory of having my name handed down to posterity as being the *first case* of its kind to be recorded in the legal proceedings of the State, and that a bad precedent in law has been established for the medical profession by sustaining the decision of the Jefferson Circuit Court, Law and Equity Division. It is but natural that I should be surprised at the treatment received, when, as an active practitioner for about twenty-five years, I want to emphasize the fact—this is the first time that I have failed to collect a fee when called to a factory or corporation in case of an accident, and it made no difference whether summoned by a subordinate employe, foreman, or general manager.

I shall now read in full the opinion of the Court of Appeals bearing upon this case, and shall take the privilege to criticize the same from a medico-legal standpoint, in the hope, if I err, it will be from a mistake of the head and not of the heart, as I have too much respect for the majesty of the law and the dignity of the Court. I desire to remind you, however, that my attorneys first attempted to get a trial before a jury in Judge Toney's court, who ruled us out on peremptory instructions, and, in giving his opinion, kindly and gracefully remarked upon the value of the services rendered, and he believed the surgeon should be liberally remunerated. Thereupon an appeal was granted, and his decision ratified by Judge Burnam of the Court of Appeals.

Opinion of the Court by Judge Burnam, October 31, 1900:

This was an action by appellant against appellee to recover for his services as a physician rendered to a servant of appellee, who was injured while in their employ, at the instance of another of their employes. The facts, briefly stated, are as follows: The appellees, J. N. Struck & Bro., are a private corporation, doing business as carpenters and builders; the appellant, C. C. Godshaw, was, at the time of the institution of this suit, a practicing physician. In August, 1894, the appellees were engaged in doing the woodwork, by contract with Finzer Brothers, upon a building which was being erected for them under the supervision of an architect in the employ of the Finzers. A man named Raidt was the foreman of the carpenters in the employ of appellees in doing the woodwork on this building, and his duties as foreman were to superintend the workmen and see that the carpenters' work was done in accordance with the plans and specifications. He was not an officer or stockholder in the corporation, but was simply employed to boss appellee's part of the job in erecting the building. Jacob Hoertz, a brick contractor, was doing brick work upon the same building, upon the upper part of the wall, and a brick was knocked off of the scaffold and fell to the first floor, striking a man named Martin Schnabel, who was in the employe of appellee, on the top of the head and inflicting a very dangerous and severe wound, which rendered him temporarily unconscious. Thereupon Raidt, appellee's foreman, directed another of appellee's employes to call in the nearest physician, who got appellant; and upon his arrival at the building Raidt directed him to take charge of the case and give Schnabel every attention, and that J. N. Struck & Bro. would pay for it. It also appears that Raidt called at the home of Schnabel and told his wife that appellant would be in charge of the case and give her husband every attention that he required, and that J. N. Struck & Bro. would pay his bill. After this employment appellant took charge of the case, and treated Schnabel for several months. And this action is to recover \$300, the alleged value of his services. No question is raised as to the seriousness of the injury to Schnabel, or of the necessity of immediate medical attention.

It is contended for appellant that the act of Raidt, the foreman of appellee, in employing appellant rendered them liable to pay the account sued on, as he acted in an emergency which required immediate medical skill to save the life of one of appellee's employes.

There is no testimony that Raidt had authority from appellees to employ appellant on behalf of the company, or of J. N. Struck, or that he was authorized to represent either of them in any capacity except as foreman of the gang of laborers employed in doing the woodwork on the Finzer building.

There is a marked distinction between the power and authority of a general and special agent to bind his principal. A general agent is usually

authorized to do all acts connected with the business or employment in which he is engaged, while a special agent is only authorized to do specific acts in pursuance of particular instructions, or with restrictions necessarily implied from the act to be done; but in either case, if the agent exceeds the authority conferred, his acts will not bind the principal. Third parties dealing with an agent are put upon their guard by the very fact, and do so at their own risk. They can not rely upon the agent's assumption of authority, but are regarded as dealing with the power before them, and they must, at their peril, observe that the act done by the agent is legally identified with the act authorized by the power. See A. & E. Encyclopedia of Law, 986, and authorities there cited.

Appellant admits this general rule of law, but insists that it does not apply in cases of emergency which require the immediate procuring of medical skill to save human life or prevent great bodily injury, and to support this contention refers us to a number of cases decided by courts of other States which relate to the employment of a surgeon by some officer of a railroad to administer to an injured employe or passenger in certain cases by reason of special circumstances, namely:

In the case of the Louisville, New Albany & Chicago Railroad Company v. Smith, 22 Northeastern, 775, a brakeman in the employ of the railroad company was seriously injured while engaged in the discharge of his duties, and the conductor employed a surgeon to take charge of and treat the unfortunate. The court held that in a case of an emergency of this kind the conductor, although an agent inferior to the general superintendent, had the power to employ surgical aid, basing its decision upon various cases of the kind in other States.

In the case of the Terre Haute & Indianapolis Railroad Company v. McMurtry, 98 Ind. 358, a brakeman was injured while in the discharge of his duties, and the plaintiff was requested to take charge of the case by the conductor. The court, in passing upon his claim, used the following language:

"In ordinary cases the conductor or other subordinate agent has no authority to employ surgical assistance for a servant of the corporation who received injuries or became ill. We do not doubt that the general rule is that a conductor has no authority to make contracts with surgeons, and if this principle governed all cases, the discussion is at an end; but we do not think that it does rule every case, for there may be cases so strongly marked as to constitute a class within themselves and be governed by a different rule.

"An emergency may arise which will require the corporation to act instantly, and if the conductor is the only agent and the emergency is urgent, he must act for the corporation; and if he acts at all, his acts are of just as much force as those of the highest officer of the corporation."

Our attention has been called to other cases in which the same principle contended for has been applied in the case of railroads, but the distinction between the liability of a railroad corporation and other manufac-

turing and private corporations for services of the character sued for here, and the reasons therefor, are very forcibly stated in *Chaplin v. Vreeland*, 7 Ind. App. Court Rep. 678-9. In this case the court said:

"Railroad companies occupy a peculiar position with reference to such matters; exercising quasi-public functions, clothed with extraordinary privileges, carrying their employes necessarily to places remote from their home, subjecting them to unusual hazards and dangers, the law has, by reason of the dictates of humanity and the necessities of the occasion, imposed upon such companies the duty of providing for the immediate and essential needs of injured employes when there is a pressing emergency calling for their immediate action. In such cases even subordinate officers are sometimes, for the time being, clothed with the powers of the corporation itself for the purposes of immediate emergency, and no longer."

It is also a matter of common knowledge that railroad companies habitually and regularly employ surgeons and physicians in connection with the conduct of their roads. But we have been referred to no cases where it has been held to be within the duties of the manager of a factory, for either an individual or corporation, to employ physicians or surgeons for employes.

We are not, therefore, prepared to hold, as a matter of law, that the employment of physicians or surgeons for injured employes comes within the scope of the duties of a general manager of an ordinary manufacturing business. It seems to us that the rule that appellant seeks to have applied to his case is confined exclusively to railroad companies, and generally in cases which involve some act of negligence on the part of the company which occasioned the injury.

Appellant has cited several cases where it was sought to hold manufacturing companies liable on the same principle, but in each of these cases the employment of the surgeon was made by the general business manager of the company, or the general superintendent of the company, and we think that the present case can not be brought within the rule laid down in any of these cases.

In the first place, the services sued for were not confined to the immediate emergency, but lasted during a period of several months. Appellees, in the mean time, resided in the same city and only a short distance from where appellant lived, and it would have been very easy for him to have inquired as to the alleged authority of their foreman, Raidt, to act for them.

Usually an injured employe procures and pays for his own doctor, and if his employer can be made liable for his injuries, he recovers this sum with other damages. In this case no necessity is shown why appellee should have selected the physician to treat the injured man during the long period of his confinement, as it does not appear that he lacked friends or relatives, who were both willing and able to do so for him.

It is also contended that even if it be conceded that under the testimony in this case appellee's foreman did an unauthorized act, which was not binding upon his employers, that there is sufficient evidence in the record

tending to ratify the act of the foreman to have entitled the appellant to have the question of ratification submitted to the jury.

There is no testimony to show that appellee ever knew or heard of the alleged employment of appellant by Raidt, and it consequently follows that there can be no question of ratification of such act. But even if it be conceded that they did know of such employment, we are of the opinion that the conversations between them, witness Hoertz, and Struck clearly rebut any idea of such ratification. We, therefore, conclude that appellee was primarily under no legal obligation to secure medical attention for Schnabel, and that their foreman had no authority, express or implied, to make any contract in reference thereto which would be binding upon them, and that if he made such a contract, there was never any ratification thereof by appellee so as to make them liable on the account sued on.

For reasons indicated, the judgment is affirmed.

Now, you have heard me read the learned opinion of the Court of Appeals, and it seems to me it is but just and fair to the medical profession and to me, as appellant, as I was not permitted to testify in some respects in my own behalf—owing to the death of the appellee—that you know my material side of this case, which I publicly affirm to be the truth.

In giving my testimony before Judge Toney, I was not permitted to repeat the conversation that passed between the appellee and his verbal contract to pay me, all of which occurred in front of his residence on the second evening following the accident to this man, Schnabel. He made the same statement again shortly before his death, and this conversation took place in the office of his planing-mill, when he added that if Schnabel did not appeal his suit, he would pay me and make Finzers and Hoertz give their share. Those were his words. The appellee was cognizant of the fact that Dr. A. M. Cartledge was in this case with me later on, at my suggestion and request; assistance was needed, and the appellee was satisfied. Then, again, John Dillman, the father-in-law of Schnabel, was not permitted to testify to the conversation that passed between him and the appellee, J. N. Struck, when the latter told him on the premises of Schnabel, as he started to the drug store, that "he would pay all expenses" to save the life of the injured man. Even Mr. Hoertz testified that the appellee had told him he would pay as I have stated, but, owing to Schnabel's suit and my strong testimony in that case, that he changed his mind. Yet my last conversation occurred long subsequent to Schnabel's trial and shortly before the death of the appellee.

To make this matter clearer, it may not be uninteresting to briefly report that Schnabel brought suit in the Common Pleas Court for heavy damages against J. N. Struck, Bro. & Co., the Finzer Tobacco Co., and Jacob Hoertz, the brick contractor. The trial took place, I think, in 1896, about two years after the accident, but Schnabel lost out on the ground of contributory negligence, which means that he disregarded the warning danger-signal placed there by the brick contractor, and the jury held that he was to blame for his terrible misfortune, and brought in a verdict for the defendants.

Now, my bill was never rendered against Schnabel, yet in giving my testimony in his trial, as attending surgeon, I am satisfied at the time the defendants were somewhat displeased, as I have already shown. What would any of you do under the circumstances? I did in his suit my honest and conscientious duty and told the truth. He had an extensive scalp wound, with a large fracture of the skull, requiring the removal of foreign bodies and necrosed bone. Schnabel did not take an appeal, and I affirm but for the death of Mr. J. N. Struck this paper would not have been read before this Society, as my bill would have been paid by him.

Judge Burnam, of the Court of Appeals of this State, in his opinion, has suggested a prophylactic remedy in similar cases of emergency surgery. He says: "Third parties dealing with an agent are put upon their guard by the very fact and do so at their own peril." He would that we have the proper authority obligate himself in writing, so that in case of death there can be no legal dispute as to the validity of the debt. You can, therefore, see how even the lips of the foreman, Raidt, were sealed, as he was not permitted to testify. There was no question raised as to the seriousness of the injury to Schnabel or of the necessity of immediate medical attention. The monetary value of the services was proven and admitted by the testimony of Drs. Cartledge and Vance. I have studied the opinion of the Court of Appeals carefully, and must confess that, while through the death of Mr. J. N. Struck I am the loser, yet the law in such cases is a wise one, and is made for protection against fraud. I can, therefore, see how the Court of Appeals, that was not cognizant of the fact that J. N. Struck was dead at the time of the trial, could say: "There is no testimony that Raidt had authority from appellees to employ appellant on behalf of the company or of J. N. Struck, or that he was authorized to represent either of them in any capacity, except as foreman of the gang of

laborers employed in doing the work on the Finzer building." After a careful analysis of this opinion, it is, indeed, a puzzle to me how the learned judge could base its decision partly upon the conversations between the witness, Hoertz, and Struck, and draw this line of demarkation as to testimony, when it is presumed he knew nothing of the conversations that took place between Struck and the appellant or Dillman, and, possibly, Raidt.

My lips were sealed, as well as those of my witnesses, and an adverse opinion was to be expected because, unfortunately, we could produce "no testimony to show that appellee ever knew or heard of the alleged employment of appellant by Raidt, and it consequently follows that there can be no question of ratification of such act." It is conceded that Raidt, the foreman, was humane enough to employ immediate surgical aid, go in the ambulance with the patient, Schnabel, to his home, and tell the family he was instructed to look after him, and that J. N. Struck & Bro. would pay all expenses. Surely Raidt did not go there uninstructed, and it is but fair to presume that he at once reported to his firm the nature and facts of the accident to an employe. It stands to reason and common sense that no foreman with the least spark of humanity and fellow-feeling in his breast could be so inhuman and despicable as to deceive a poor, distressed, and afflicted family by false pretenses when he had nothing to gain by it. Grant, for argument's sake, that a foreman has legally no right to bind his corporation, yet from my knowledge of and connection with this case I have a right to believe that Raidt, the foreman, told the truth, and furthermore, Mr. J. N. Struck, deceased, would endorse and ratify all he (Raidt) said, as well as the other testimony I have mentioned, were he alive to-day. I desire most respectfully to call the attention of the Court of Appeals to the fact, of which no doubt he had no knowledge, that I did just as he writes when he says: "The appellee, in the meantime, resided in the same city and only a short distance from where appellant lived, and it would have been very easy for him to have inquired as to the alleged authority of their foreman, Raidt, to act for them." But I was not permitted to testify to this effect, owing to the death of the appellee.

This is an object-lesson to the profession at large, and the question naturally arises: What shall the doctor do in similar cases? Let us, without sentiment, look this question squarely in the face and consider it seriously. Can we be true humanitarians and at the same

time strict business men in cases of emergencies? Must we, in such trying times of trial and need, before relieving the injured and, perhaps, save human life, ask who is going to pay for our outlay of material, time, and knowledge?

We have been told that "third parties dealing with an agent are put upon their own guard by the very fact, and do so at their own risk." No true physician (and the laity would rightly condemn him for such inhuman conduct) would demand protection from the first party of a factory or corporation when his services are immediately needed. Surely the learned Judge Burnam must be mistaken when he says, "Usually an injured employe procures and pays for his own doctor." It has been my experience, when immediate surgical or medical attention is required for an employe hurt in a factory, corporation or construction of a building or what not, that usually the nearest doctor is at once sent for or some doctor whose services must be sought by the parties indemnified by accident insurance. In this case there was an immediate emergency, and the poor, unfortunate laborer did not employ the appellant, and I know as an undisputed fact he was financially unable to pay for the services rendered. Again, it is now a very common and proper thing for a factory or corporation to carry indemnity insurance for self-protection against suits upon the part of injured employes, and it therefore seems to me that it "does come within the scope of the duties of a general manager of an ordinary manufacturing business" to employ medical and surgical aid as well as railroad companies. The dictates of humanity cry out just as loudly to one business concern as the other, and the advances on the broad road of enlightenment and civilization are being encouraged and recognized by the human heart. There is, in this respect, to my mind, no difference between a "foreman of a gang of laborers," who bosses and superintends the carpenters in the construction of a large plant, and a conductor on a railway, who bosses his gang of hands and superintends a train of cars loaded with passengers or freight. Therefore, I maintain that since in both cases there is a question of immediate necessity, why should not the doctor be paid for his labor? It is a blessed act of humanity now that factories and corporations, as well as railroads, look after the immediate emergencies of their employes and endorse and ratify the action of one employe toward another in case of accident. In fact, the names of physicians, so-called contract doctors, are posted in different parts of a building where hands are at

work, and any employe is expected to summon a doctor in immediate emergencies at once. The accident indemnity company is then notified, through the proper authorities, and thus the surgeon is protected, or at least he should protect his own interests.

The good doctor is a true humanitarian. He is faithful to his calling, loving his profession for humanity's sake, and responds quickly, without hesitation, to the cries of suffering and distress, to relieve the injured and oftentimes save human life. Can he, therefore, under such surroundings and conditions, stop to barter, trade or make a contract? The medical profession and humanity are synonymous terms, and yet how often is the doctor imposed upon! To me, in emergency surgery, the word of the proper authority is all-sufficient, yet why should not the doctor also be a business man? Would a contractor, builder or manufacturer consider himself safe and protected without a written contract? Shall the doctor do likewise? This is a hard question for me to answer, and I hold that the conscience of a good and true physician must be his guide of action in the discharge of duty to a fellow-sufferer.

I close this paper without any bad feeling or unkindness to all parties concerned. I am happy in the consciousness of duty well performed, and the consolation of having saved the life of a fellow-being, a poor, common laborer, and thereby prevented a widow and many innocent orphans from ekeing out a more miserable existence. Let us hope in the future it will not be necessary to combine business with duty, but when summoned to respond to the call of distress and suffering in emergency cases the doctor will not alone be recognized as a humanitarian, but treated in accordance with the Golden Rule in the fullest sense of its meaning, and, above all, that the moral law more than the legal code shall be the rule of action between the employer or corporation and doctor in any and all cases of emergency surgery. I came, I saw, but I was conquered by the majesty of the law, yet I shall always maintain that, if not legally then morally, the debt is just and unpaid, and be it said to the sacred memory of my friend, Mr. J. N. Struck, deceased, I am satisfied beyond the question of a doubt my claim would have been paid and all unpleasant litigation avoided had he lived.

We have been taught to believe that He who rules the destinies of nations is alone infallible and is the Supreme Judge of the universe. While we do not question the honesty and sincerity of the judges whose opinion in this case has become a law, yet might they not be in the wrong, as it is human for the best of men to err?

It is a recognized fact that the medical profession is a great friend of charity and philanthropy. When a doctor does charity practice it is true charity, but when he works for pay he naturally expects to be paid, as I did in this case. Therefore, reasoning from the standpoint of the doctor, it does not look fair and just if this law shall forever hold good and incontestable.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, March 1, 1901, the President, Louis Frank, M. D., in the Chair.

Melanotic Sarcoma of the Choroid. Dr. William Cheatham: The specimen I wish to present to-night is an eye removed from a maiden lady, aged fifty-four years, February 22d, who came into my office the Monday preceding to be suited for glasses. Her vision in this eye was $\frac{2}{8}$ with a strong cylindric. I found with the ophthalmoscope a diffuse ancient choroiditis. In the lower middle part of the fundus there was a globular, smooth, well-defined growth; the upper part of the growth came to near the level of the lower edge of the pupil. The surface of the growth was smooth, the vessels not movable, and not tortuous or wavy until they passed from or left the base of the growth; then they presented such an appearance as seen in detached retina. There had been no pain; the patient complained of nothing except that she wanted some new glasses.

I referred her to Dr. Ray for consultation. He reported back that it was one of those doubtful cases; that he believed that it was a growth. I advised immediate removal, to which she submitted, and the specimen I present to-night verifies our diagnosis, as it will be seen we have a melanotic sarcoma of the choroid. The well-defined outlines of the growth, with an absence of any appearance of a subretinal effusion, except away from the growth, made me feel sure of my diagnosis, and especially when confirmed by another oculist.

Noyes says tumors of the choroid occur in one of every 1,500 cases of diseases of the eye; of these, 85 per cent are sarcomata. Cause not known; occasionally trauma; when near macula discovered early,

* Stenographically reported for this journal by C. C. Mapea, Louisville, Ky.

because sight is soon involved. Dr. Noyes recognizes four stages. First, early growth; no irritation; difficult to make out, especially if retina is lifted by an effusion. If retina is not so lifted, surface will be smooth, rounded, and blood-vessels not kinked and not shaky. Lens may become opaque at this stage; duration of this stage from six months to four years; average of sixty-seven cases, twenty-one months. Second stage is inflammatory or glaucomatous. This may end in chronic glaucoma and the eye rupture or atrophy; if either, the disease will extend either directly through the sclera, optic nerve, or blood-vessels. This would include the third stage also. The fourth stage would be that of cachexia and metastasis. The treatment is, of course, surgical. Prognosis, local return of disease rare; I have recently had two; metastasis common.

Of twenty-two cases, Fuchs shows the result in 17.13 had died; 11 by metastasis; immunity, one case only. Metastasis runs from a few months to five years; average two years. Sarcoma cells have been seen in choroidal circulation. The liver is the most frequent place of deposit.

Griffith tabulates the known history of twenty-three cases of sarcomata of the choroid. Fourteen were alive in from three to ten and a half years; nine died from one year and four months to six years and eight months.

I presented to this Society some months ago an eye with a sarcoma of the choroid removed from a young lady twenty-two years old. This was in the inflammatory or glaucomatous stage. I had discovered the growth two years before.

Discussion. Dr. S. G. Dabney: Dr. Cheatham has reviewed the literature so thoroughly that there is not much left to be said. I saw the lady whose case he reports nine years ago. I examined her eyes for glasses; she had no sign of disease at that time; she had a high degree of astigmatism, nothing else. The doctor was fortunate in making the diagnosis so early in this case, while the vision was so good. The earlier the diagnosis and operation in these cases the less probability there is of extension of the disease, or of subsequent metastases. I think the prognosis in this case is good.

I removed a lady's eye six or seven years ago for sarcoma of the choroid; her daughter was in the office this morning and I asked about her mother's health, and she said it was perfect. As a rule, we base

our diagnosis, if we are fortunate enough to make it in the very beginning, upon the solid appearance of the growth, and by absence of waviness of the vessels sometimes seen. But if these symptoms are not sufficient to make the diagnosis certain, we depend upon the second stage, increased tension. Where the eye has a detached retina, together with this symptom mentioned, we are warranted in removing it. It seems to me that these cases are more common than they are said to be. While I have only seen one case of sarcoma of the choroid, I have heard of several others. They are not quite as rare as the books would suggest. The prognosis depends upon whether the disease has extended beyond the scleral coat. The case I operated upon was beginning to extend—just protruding through the sclera—but after seven years there has been no return or development elsewhere.

Dr. T. C. Evans: Dr. Cheatham is to be congratulated upon making such an early diagnosis in this case, especially in the absence of pain. I was struck with one point, that is, that the eye should have retained this amount of vision with a tumor as large as this.

I remember a case which occurred eight or nine years ago, an eye removed from a patient at the City Hospital. The eye was totally blind from cataract; the eye was removed without making a diagnosis, simply for the relief of pain. The tumor was not more than two thirds as large as this one; still the patient had been totally blind for two years, and suffered a great deal of pain. It seems that the symptoms are not altogether due to the size of the growth. In that case microscopical examination showed it to be a melanotic sarcoma. The patient was alive up to a year ago.

The essay of the evening, "Tuberculosis of Childhood," was read by B. C. Frazier, M. D. [See page 441.]

Discussion. Dr. J. A. Ouchterlony: The paper is so exhaustive that there is little to be said; however, the subject is so large and so extensive that it naturally suggests some thoughts. I notice in speaking of the signs of tuberculosis the essayist did not refer to one I have seen mentioned as a sign of early tuberculosis, namely, a marked and constant dilatation of the pupils; not a paralytic dilatation, but one that seems to be due to irritation in the spinal region, perhaps of the sympathetic, perhaps owing to some blood change.

As to the mode of transmission of tuberculosis, transmission from the lower animals to man can hardly be overlooked, especially at the

present time, when pet animals are so often found in families. I have seen quite recently a report of cases where undoubtedly the disease had been transmitted from one pet animal to another—one dog to another—even to a cat that was playing with one of the dogs, and also to a child that had been in the habit of kissing the dog, etc.

The transmission or ante-partum infection is an exceedingly interesting part of the subject. Monti, whom Dr. Frazier alludes to, has spoken of that quite extensively. He speaks first of transmission by paternal infection, then by maternal infection, through the placenta, through the amniotic fluid, etc., yet he is forced to confess that this mode of infection is extremely rare, and we are forced to practically ignore him in our clinical work.

The vast majority of cases of tuberculosis are not inherited as such; the only thing that is transmitted from parents to offspring is a *locus minoris resistentiæ*, a susceptibility to the disease, probably from a low vital tone of the tissues. One reason why tuberculosis is so destructive in children is probably because the tissues are so soft and so succulent, and the circulation is so short that it is more difficult for the process of sclerosis to be set up; still Monti admits that even when there has been ante-partum infection the bacilli may lie latent in the system for an indefinite length of time.

I notice in tuberculosis of children there is a much greater tendency of the disease to become generalized. I have made autopsies frequently where every organ of the body was tuberculous; the meninges of the brain, the bronchial glands, almost as a matter of course the pleuræ, the pericardium, the peritoneum, and all the different viscera, the lungs, the liver, the kidneys, spleen, etc. I have never seen a case of tuberculosis of this kind get well. I have never seen a case of pulmonary tuberculosis in a child get well. But there is a form of tuberculosis that we frequently see in children, and which Monti declares not to be tuberculosis exactly (I suppose one reason for it is the difficulty of finding the tubercle bacillus), and that is the different cutaneous infections, ozeni and glandular infections. I have repeatedly seen cases of what I supposed to be tuberculous disease of the lymphatic glands which went on to suppuration, and in some cases undoubtedly there was general tuberculosis afterward, and yet we could find no trace of the tubercle bacillus in the pus. I have been told that the putrefactive germs exercise a destructive influence upon the tubercle bacilli, and possibly that may have been one reason why Monti has revived the old term scrofula,

and insists upon it that it should be accepted as a distinct disease from tuberculosis. Generally at the present time I believe the profession is inclined to consider the disease, however, as tuberculosis, and the term scrofula ought to be relegated to the lingo of obsolete medical terms. It is remarkable that a germ which is so very vulnerable and so perishable should be capable of doing so much damage. The tubercle bacillus is very short-lived; it does not flourish very easily, certainly not in the moist stage; it is capable of doing so much harm, yet is so easily destroyed.

Dr. J. B. Marvin: In speaking very briefly on this interesting subject I wish to sound a note of good cheer and hopefulness. I am very skeptical about the transmission of tuberculosis through the semen or the placenta; I think for clinical purposes we can practically rule out antenatal tuberculosis. If we will bear in mind the homely dictum of the "three S's"—seed, soil, and season—being necessary factors for the development of almost all these infectious diseases, we will not have to hunt back for heredity in the transmission of tuberculosis. I think even the transmission of tuberculosis to the human being from lower animals is practically limited to the cow, not from other animals except in rare instances; and I doubt very much if from the cow we get it from the udder. I am inclined to think that the tuberculous cow does not transmit the bacilli through the milk, but from her lungs; by coughing or sneezing the milk is infected, and we get intestinal or abdominal tuberculosis in the infant drinking that milk.

During the past twenty years that I have had charge of the Baptist Orphans' Home we have had over eleven hundred children; we take these children from all over the State, from the houses of the poorest of the poor; entire orphans, occasionally only half orphans. In these children—many of them are tuberculous or had inherited this tendency—we have had good opportunity there to watch their development, and also to see what hygiene, proper feeding, and little or no medicine would do in the prevention of the development of inherited tuberculosis. We have had eighteen deaths in thirty years at that institution; nine of them have been from tuberculosis. We have had only one case of joint trouble; there has been one case of empyema; we have not had a death from typhoid fever. One or two of the nine died of tubercular meningitis. Over four hundred children have teethed there, and not a child has died of intestinal troubles. We have taken milk all this time from the same milkman. What does this prove? Certainly in stripping the

State of Kentucky of children of that class we must have gotten some whose parentage was bad. We have had one case of syphilis in all that time. This is pretty good evidence that all the people in the State have not bowed the knee to Baal or Venus; that in an uninfected location the sore may be rendered unfavorable for the development of the trouble. If these children had had this strong taint of tuberculosis in them, more of them would have cropped out and developed during the period of dentition. We have had numerous outbreaks of measles and whooping-cough, which certainly ought to have brought to the surface any tuberculous element. Personally I have seen more deaths from pulmonary involvement, next from tubercular meningitis. I believe the mistake is often made of calling typhoid fever meningitis, and *vice versa*. I have seen a number of cases in the Home that did not develop either meningitis or pulmonary trouble, but had a form of mesenteric trouble that we used to call tabes mesentericus. Either that is more amenable to treatment or it belongs to another category of cases indicated by Dr. Ouchterlony, what we used to call scrofula and not tuberculosis.

Another point: Numbers of these children, that get along there very well, come into the Home dirty, wormy, some with sore eyes, scrofula, eczema, etc. They do well in the Home under hygienic management, but when they are adopted out they more frequently die. In other words, there in a city, so to speak, more crowded together, you would think; still they live better there, and the mortality is less than when adopted by people throughout the State. My experience there has been different from that indicated by the essayist in one respect, namely, the use of alcohol. We use codliver oil. These cases of abdominal trouble are rubbed with whisky and codliver oil every day. They wear flannel bandages saturated with these agents. They do not get whisky internally. I do not suppose we have used a pint of whisky a year in that institution. My experience has been that children of all classes need much less alcohol than is sometimes administered to them.

Dr. A. M. Vance: This is such a tremendous subject that one scarcely knows where to begin in discussing it. Dr. Frazier has given us a valuable and interesting paper. In the early part of the paper he mentions the appearance of children who have tuberculosis. My experience goes to prove that the healthiest-looking, most robust and perfect-looking children imaginable have tuberculosis. My experience has never proven to me that tuberculosis is ever congenital.

Another point: The essayist spoke of meningitis being a sequel or coincidental with other forms than bone tuberculosis. My observation is that meningitis is often a complication of bone tuberculosis, particularly in the so-called cold abscesses which have been mismanaged. I have known a number of children to die of meningitis when cold abscesses had been opened prematurely and improperly cleansed. I speak particularly of bone tuberculosis; I know very little about the other forms.

I think after mechanical treatment, which is to fix the part in the best position for future use, that the other treatment is hygienic. In my early experience in bone disease, following the teaching of Hilton, who has produced the best book ever written on bone disease, we used to think, particularly when I was in New York, that he drew too glowing conclusions about his results. We could not get any such results in the tenement-house children. He reported his cases as getting well, which we could not understand. Since I have been here among people who are in better surroundings I get the same good results, which goes to prove that the hygienic management of these cases is very important. The best results come in those children that are the best fed. I have always believed that if tuberculous children could be separated from tuberculous surroundings they would stand about the same show of failing to have tuberculosis as the average child who was non-tuberculous, proving my absolute opinion that tuberculosis is acquired after the birth of the child.

Dr. Frazier spoke of twelve cases, in which one of the parents had dropped dead. I am inclined to the belief that many of the people who have dropped dead, attributed to heart disease, died of hemorrhage into the brain; and syphilis is the ordinary forerunner of that, and this, in my opinion, is often the weakening element in the child that allows tuberculosis to be engrafted. Of all the remedies in the way of medicine that in my experience will help these children, whisky is the sheet-anchor. Whisky in proper doses does more good than any thing else.

As to the treatment of these cases, I am thoroughly a conservative surgeon in bone tuberculosis. I believe in Paget's old rule in regard to breaking down of tuberculous processes—the so-called cold abscesses—that the longer they remain unopened the better for the patient. I never open a cold abscess until I have to, except by the aspirator, and I believe that three out of five cold abscesses are cured by aspiration.

More lives are saved by absolute conservatism in tuberculous joint disease than by any form of operative procedure.

Dr. F. C. Wilson: I doubt very much the direct transmission from parent to child, either maternally or paternally, of the disease itself, more than simply a predisposition. The sources of infection to which we are all exposed are so numerous that it is hardly worth while to search elsewhere; we know that infancy is very much more susceptible to infection than adult life, although the child is more resistant in its condition than the adult is.

Among other sources of infection not mentioned by the essayist may be stated the surroundings and quarters; the class of children who seek admission to the Children's Hospital may come from parents who lived in rented quarters that have been occupied formerly by tuberculous cases and the premises left in an infected condition. Patients coming from such quarters as this have been exposed to an atmosphere thoroughly infected, and this fact is worth mentioning in connection with the other causes enumerated by the essayist.

Dr. Marvin gave a more hopeful view than that usually entertained. I fully agree with him that many of these cases are amenable to treatment. It seems to me that if these tuberculous children were all kept in the best hygienic surroundings, given plenty of the most nourishing food, codliver oil and whisky, that the great majority of them will get well. I believe they respond to treatment of this kind. I have seen a great many cases in the earlier years of my experience, part of it spent in the Foundling Hospital of New York, where children are received from a few hours old up to several years from the slums of the city of New York; many of these were evidently tuberculous, yet the majority of those who survived the dangerous period of bottle-feeding lived, and responded well to the treatment for tuberculosis. I have seen them in the condition known as *tabes mesenterica*, with enlarged glands, nothing but skin and bones, yet from the external application of codliver oil they would fatten up and become entirely well. In better surroundings still many of these cases will respond promptly to medication and proper hygienic surroundings. I am inclined to take a more favorable view of the disease in childhood than that accorded by the essayist.

Dr. William Cheatham: These subjects are usually very nervous and irritable, and in all these cases you will find the pupils much more dilated than normal. In tuberculosis of the ear one symptom we see

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is its absolute painlessness. Middle-ear disease due to other causes is always attended by more or less pain.

Dr. A. M. Vance: I have been working with these children now a quarter of a century. As to the hopefulness of the ultimate outcome, I think in true bone tuberculosis that more than fifty per cent of these children die before they reach the age of twenty-five years. The boys live longer than the girls. The trying time with girls the subjects of Pott's and hip-joint disease is about the time they are budding into womanhood. In boys the most dangerous time is between eighteen and twenty-five. A great many of them die about this time with pulmonary tuberculosis.

Dr. Louis Frank: If I remember correctly, we were taught by Koch and others in Berlin that the changes caused by the tubercle bacilli themselves were primarily and really conservative, and that many of the symptoms from which these patients suffer and the great destruction are due to mixed infection. And his theory of the treatment of tuberculosis by his tuberculin was really along this line, hastening the process, producing destruction in those areas that had been infected by the bacillus itself.

I think that tuberculosis is undoubtedly inherited. I feel sure, however, that the vast majority of cases of tuberculosis are due to direct infection, and in my mind such a thing as a tuberculous tendency or hereditary without direct transmission does not exist. Either it is transmitted directly as it exists in the child, or there is no tendency toward the disease. If you take these children born perfectly healthy, without the tubercle bacillus present in them, and remove them, surrounding them with non-tuberculous atmosphere, non-infected air, non-infected food, where they are free from the liabilities to infection, unless they have the disease at the time they will not develop tuberculosis any more readily or more quickly than other children. I think this point has been satisfactorily demonstrated.

Dr. J. A. Ouchterlony: I wish to call attention to the fact that germ diseases which are really inherited as such always develop very shortly after birth, or the individual is born with unmistakable signs of the disease. We know that smallpox may be transmitted to the fetus in utero. Sir Thomas Watson is said to have been born with whooping cough. When syphilis is inherited it always develops during the first few weeks of life. The vast majority of cases of tuberculosis develop when the individual has reached early manhood, and yet these cases

are said to be inherited. The individual is born of tuberculous stock, the father, mother, brother, and sister may have had the disease and died. If that individual had been born with tuberculosis, inherited it, it would undoubtedly have manifested itself during childhood; and when the disease does not develop in early childhood, I believe it is always due to post-natal infection and is not inherited.

Dr. Marvin's remarks about seed, soil, and season are exceedingly applicable. A great many individuals who have not been afflicted with an inborn tendency or susceptibility, although they are exposed over and over again to the infection of tuberculosis, do not develop the disease; but those individuals whose systems possess suitable soil do develop the disease.

Dr. B. C. Frazier: One thing stated by many of the authorities is very hard for me to reconcile, viz: I do not see any good reasons for speaking of latent tubercle bacilli, the tubercle bacilli being deposited and lying latent for many months or even years, then suddenly becoming active. If the bacillus is short-lived, as the authorities state, I do not understand how it can live without multiplying; how it can lie latent without some evidence being shown.

The question of congenital tuberculosis does not, as a matter of course, cut any particular figure. Not a sufficient number of cases have been reported to make the question of serious import. However, I found more cases recorded than I anticipated when I looked up the literature of the subject. Quite a number of cases were reported among the lower animals, particularly in calves.

The point made by Dr. Marvin about the bacilli being coughed or sneezed from the cow, thus infecting the milk, is a very good one, although in this country we have comparatively little tuberculosis among cattle. I have been familiar with live stock all my life, and have seen very few evidences of tuberculosis among cattle.

The chances of infection among children from each other are not nearly so great as among adults, because the principal source of infection is through the respiratory tract, through dried sputum, etc. Children do not expectorate and do not cough as much as adults, the sputum is swallowed and passes off through the bowel, and in this way is more likely to be gotten rid of entirely.

There are so many new treatments for tuberculosis that it is almost a hopeless task to enumerate them, nor do I think it worth while.

There have been a few cases in the Children's Hospital within the last few years where the parents were much opposed to the administration of whisky. One child at the hospital now has tuberculosis of the spine (Pott's disease) with more or less paralysis, almost complete paraplegia, badly nourished, with enlarged glands, etc. The mother was opposed to its being given whisky. This child went along for many weeks getting worse, and I thought it would die. I began to give it whisky, a teaspoonful four times a day, and the child began to improve, and during the last month has gained four or five pounds. Whether the whisky is responsible for the improvement, or whether the child happened to begin to improve at this time, of course I do not know. I could recite a great many cases where whisky has seemed to be a great factor in recovery. . B. A. ALLAN, M. D., *Secretary.*

NEW YORK ACADEMY OF MEDICINE—SECTION ON ORTHOPEDIC SURGERY.

Meeting of March 15, 1901, George R. Elliott, M. D., Chairman.

Dr. Homer Gibney presented a boy, aged eleven years, who had had infantile spinal paralysis. There was equino-varus of the left foot with slight cavus. According to previous history, astragalectomy had been performed five years previously without beneficial results. November last Dr. Gibney exposed the tarsal bones, curetted the cartilages, sutured the wound, and applied a plaster of Paris bandage. The result was that the foot was shown at a right angle with slight motion.

Acute Hip Disease. A second patient, a girl, six years of age, was shown by Dr. Gibney. She was suffering from acute hip disease when first seen in October, 1899. A brace was applied and the child put to bed. Her hip became worse; the hip was stretched, and a plaster of Paris spica was applied. An abscess developed, and was opened January, 1900. Improvement followed the incision, but owing to a profuse discharge, fever, and loss of flesh the hip was excised April, 1900. The child improved rapidly after the operation; a small sinus remained.

Paraplegia Complicating Spinal Caries. Dr. Gibney presented a third patient, a girl, nine years of age. She was admitted to hospital December, 1900, with the history that her disease followed an attack of

diphtheria five years previously. A plaster of Paris jacket was worn for six weeks at onset of disease, and then for eighteen months she wore a Taylor brace with head-rest attachment. In 1897 she had an attack of paraplegia which lasted six months. One year ago she had a second attack, which persisted at time of admission into the hospital. There was at that time paraplegia, incontinence of urine, increased reflexes with marked ankle clonus. December last the child was put to bed, wearing a plaster of Paris jacket with head extension. The jacket was reapplied January, 1901, with head extension and plaster straps over the shoulders. A third jacket was applied February 21st. Improvement was gradual, and child was shown with fairly good voluntary use of legs.

Dr. Royal Whitman said he hardly thought it fair to say that the paraplegia developed while under treatment by the Taylor brace. The child had come under his observation four years before with very slight deformity. The child was under poor control, and had been through many hands, including osteopathy. Recently he had again seen her and referred her to the hospital for R. and C. He would suggest that the case was one that illustrated ineffective treatment rather than of mechanical treatment of any form.

Dr. Gibney said he simply showed the patient to demonstrate the effect of a well-applied apparatus. As a matter of fact the paraplegia did develop while the child was wearing a Taylor brace, but was under no one's medical or surgical care. The brace was ill-fitting; in fact, worse than useless.

Coxa Vara. Dr. W. R. Townsend presented a boy, fifteen years old, who came to the hospital for R. and C. one month ago, with the history that without any apparent cause one year previous he began to have difficulty in walking and was easily fatigued. The difficulty in locomotion had steadily increased. The limbs were equal in length, and the X-ray revealed a very marked case of coxa vara. There was limitation of motion, and the great trochanters were one inch above Nelaton's line.

Limitation of motion, especially in flexion and extension, was very great. There was not over fifteen degrees of motion on the right side, and none on the left. Standing, the knees could not be separated more than three inches. The patient sat with difficulty. A radiograph was shown. He asked if any member of the Section had seen a case of coxa vara with so much limitation of motion.

Dr. Henry Ling Taylor replied that it was more severe than any he had seen.

Dr. Whitman said that limitation of flexion was always present in these cases, although limitation of abduction was the more marked feature. He stated that some years ago he had presented a patient before the Section with even more marked disability than the present one. In that case the deformity progressed until the patient was totally disabled. After the acute symptoms subsided he performed an osteotomy on one femur with so good a result that the operation for the lesser deformity was never made. The man finally recovered perfectly; motion returned as far as flexion and extension were concerned. He believed that operative treatment would completely relieve the condition.

Dr. A. B. Judson asked what was the sequel to such conditions. What became of these patients after they passed from the surgeon's observation?

The Chairman replied that the subject had been rather fully discussed at the last Clinical Meeting of the Section, and the conclusions arrived at were that very marked improvement followed osteotomy properly performed after subsidence of acute symptoms. In the absence of operation more or less permanent disability; condition commonly remained in *statu quo*. He referred Dr. Judson to the report of the Section proceedings January 18, 1901.

Spondylose Rhizomelique. Dr. Townsend presented a man, thirty-five years old, who, five years ago, began to have stiffness of the back and difficulty in walking. He had had two attacks of muscular rheumatism. He had had no pain excepting in the upper part of the back and when sitting. These symptoms increased until the present time; he was obliged to use crutches. The thighs were flexed on the pelvis about twenty degrees; extension and flexion were much restricted. He regarded the lesion of the hip-joints and the spinal stiffness as typical of spondylose rhizomelique. He suggested a plaster of Paris jacket as of some service.

Dr. George R. Elliott said errors of diagnosis were not infrequently made, and the disease mistaken for one of the varieties of chronic spinal rheumatism; frequently great spinal pain and hyperalgesia accompanied the progress of the disease, subsiding after a while. He mentioned a patient he had seen a few years ago, before the disease had been carefully described, where he examined under an anesthetic,

owing to the great degree of pain present. The pain subsided after three or four years, the marked ankylosis so characteristic of the central type of the disease remaining. This patient was shown before the Neurological Society by Drs. Sachs and Fraenkel, October, 1899.

Dr. Townsend showed two radiographs, one showing union of a fracture of the neck of the femur after use of a long traction hip splint (patient shown before Section, January 11, 1901); the other radiograph was of a case of double dislocation of the hip-joint which had been treated by the bloodless reduction eight weeks before. The picture was taken through the plaster of Paris splint.

Congenital Club-Foot. Dr. Judson presented a boy, five years old, first seen when there was marked and resistant typical double deformity which had been reduced by the painless continuous leverage of a simple brace applied with adhesive plaster and often removed for manipulation of the feet; later a walking brace had been used; all the apparatus used was of a common kind with a single invisible upright. The braces were made of tractable metal allowing change from the deformity to the normal and later to overcorrection. The feet followed these changes through force of adhesive plaster, and later by body weight. At the age of fifteen months the deformity had disappeared. Treatment was resumed after seven months' interval, the outer border of the feet having become slightly callous; walking braces were applied and worn for twenty-two months, finally laid aside January 15, 1900. On presentation the child walked and ran with normal ability and without defect in his gait. The only remaining defects were slightly shortened Achilles tendons, but this was slight, as he could even walk on his heels.

In this affection the following were to be considered as favorable elements:

1. The certainty of rapid growth.
2. The plastic or formative condition of the parts.
3. The absence of body weight for eighteen months.
4. The certain effect of continuous leverage.
5. The weight of the body applied on the right side of the plane between varus and valgus, in virtue of which the child could stamp his foot straight.
6. The absence of necessity for haste.
7. Use of tractable metal. An unfavorable point was the postponement of treatment till the child was two years old.

Dr. T. Halsted Myers congratulated Dr. Judson on his excellent result, and said that when the child could be kept under observation and control, such results could be obtained. In all cases, whether tendons were divided or not, subsequent control was necessary for a year or two at least.

Dr. R. A. Hibbs also commented on Dr. Judson's good result, and asked if there had been much internal rotation, as that made treatment difficult or otherwise.

Dr. Whitman said he could not agree with the last speakers that Dr. Judson's case should be considered at all remarkable as to result; it was an average case and an average result. It was evident that there was still a slight tendency to varus, dependent upon the slight equinus which still persisted. This he thought illustrated the weak point in Dr. Judson's scheme of treatment, that having overcorrected the varus deformity, he depended upon the weight of the body to overcome the residual equinus, whereas this deformity should be as thoroughly overcorrected during active treatment as the varus.

Dr. Judson replied that a further elaboration of the principles of continuous leverage would have secured a normal tendo-Achilles and completely corrected the equinus; while the result was not absolutely perfect, he considered it as supporting the statement that an operation or violence was, in this affection, a confession of failure at some time in the history. In practice the resistance of tissue was one of the lesser difficulties to be overcome in the management of cases of this kind; greater obstacles were unreasonable haste to see a result and mistaken reliance on rapid and easy methods.

Dr. Taylor regarded the result very creditable, but did not think that all danger of a relapse was passed. He did not agree with several of Dr. Judson's statements, which implied that operations were never indicated. Operative treatment was often unsatisfactory, if not combined with and followed by mechanical treatment; each method had its proper field, and often both were needed. While himself inclining to conservatism, he considered Dr. Judson's remark in disparagement of operative interference much too sweeping.

Funnel Chest. Dr. Judson presented a man, seventy-one years old, having a deformity which, although rare, had been described by a number of observers. It was a curious malformation, entailing no great disability, of uncertain origin, and calling for no treatment.

From an angular projection at the junction of the manubrium and the gladiolus there was a continuous depression till the deepest place was reached at the end of the xiphoid appendix. The cartilages of the lower ribs were prominent as usual on each side, and the front of the chest, although somewhat flat, was normal except for this funnel-like depression, which began on each side at the nipple line and was cup-shaped at the bottom, with a depth of an inch and a half, unchanged by expiration (31 in.) or inspiration (34 in.).

The man said he had always been so, and had never known of another person similarly affected in his family. He had eighteen brothers and sisters. He had been fond of athletic sports in his youth, was a shoemaker by occupation, and had enlisted in the military service in 1862. There was no history or sign of rickets or spinal disease. He had been free from notable diseases of the chest or otherwise, although years ago he had been told that he had serious chronic lung disease.

Dr. H. S. Stokes said it was difficult and frequently impossible to make a correct physical diagnosis when chest deformity existed. He cited a case of Pott's disease where the patient had been told four years ago that he had pulmonary tuberculosis, and a bad prognosis had been made. He had frequently examined the sputum of this patient with negative results; all signs of lung involvement disappeared. He cited two cases of lateral spinal curvature which had lately come under his notice where errors of diagnosis had been made. In one the diagnosis of tubercular consolidation was made, which turned out to have been only a slight bronchitis.

Dr. Myers presented a case of polio-myelitis in a boy thirteen years old; the disease dated from early infancy; the case was exhibited to show the muscular changes. The right quadriceps was completely paralyzed, and the right ligament patella was one inch long; the left quadriceps was fairly strong, and the ligament patella two and one fourth inches long. Osteotomy had been performed on the right side for a recurring genu valgum, which had been caused by the greater power of the ext. hamstring muscle. The muscle was split and one half transplanted and given to the internal hamstring, and the knock-knee did not recur. He called attention to the marked rotary lateral curvature of the whole dorsal spine, with convexity to the left, the stronger side, while concavity was toward the side of paralysis of the lower extremity and erector spinæ muscles. In club-foot due to polio-

myelitis the shortening always occurred in the stronger or least paralyzed muscles. By analogy, the erector spinæ muscles on this boy's left side—those least paralyzed—should be contracted, and they were. This drew the entire thorax strongly to the left and downward. To maintain his equilibrium, the boy had thrown his head and shoulders to the right by voluntary effort, inducing the form of curvature present.

Congenital Dislocation of Hip, with Fracture of Shaft of Femur. Dr. Elliott presented a five-months-old baby, sent to him three weeks previously for diagnosis. He found dislocation of left hip and suspected fracture, both of which were confirmed by an X-ray picture. According to the history, birth of the child had been very difficult—the breech had presented, and great difficulty had been experienced and instruments used. No difficulty was anticipated in reducing the dislocation. The fracture of the femur, however, complicated the matter. He said he proposed to attempt reduction under an anesthetic, and if any great difficulty presented itself, wait till later and do it by the Lorenz non-cutting method.

Congenital Dislocation of the Patella. Dr. Elliott showed a patient, a young man twenty years old, with dislocation of the right patella. His relatives had told him that it was first noticed two days after his birth; he wore apparatus at various times, but nothing since 1888. The patella slipped into place on extension, but on flexion slid over the external condyle of the femur, even if force was applied to hold it; there was two inches of atrophy of the right thigh; a slight degree of knock-knee existed. All that the patient complained of was a sense of weakness and uncertainty of the leg. The patient wanted to know if the condition could be remedied without leaving him with a stiff knee. He preferred his present condition of slight disability to a stiff leg.

Dr. Hibbs said that he recalled a case of outward dislocation of both patellæ in a man thirty-five years of age. The condition had existed since three years of age; there was nothing to suggest the cause save knock-knee, which existed to a marked degree.

Dr. Townsend said he had shown a girl ten years ago who could at will dislocate both patellæ. He advised an operation which would change the direction of the ligament patella at its attachment to the tibial tubercle, by moving the tubercle and reattaching it so that the patella would be kept in the intercondyloid space. Reattaching some

of the fibers of the varus might also be necessary to prevent the pulling of the patella to one side.

Dr. J. P. Fiske suggested correcting the genu valgum present by an external osteotomy above the knee-joint, thus converting the knock-knee into a mild bow-leg. This would not only hyper-correct the weight-bearing line, but also give the patella and attached muscle a chance to act in a proper line.

A Case of Spondylolisthesis. Dr. Taylor presented a man nineteen years old, whose occupation was loading and unloading furniture. Last December he sought treatment for weakness of his back and occasional pains in the lumbar region at night after hard work. About three years ago he slipped on the ice and fell heavily on the buttocks. He worked the following day; he experienced no inconvenience for some time, but within a few weeks he noticed a decided projection of lower part of spine, which he still has. He thinks it is less now than formerly.

Examination revealed a marked projection of the fifth lumbar spine and a deep depression above it. At the bottom of this depression could be felt the fourth lumbar vertebral spine, one half inch in front of its normal position. The patient could bend forward and touch the floor, and showed none of the characteristic attitudes of the rigidity of spondylitis. He was strong and able to work. There were no rectal or bladder symptoms, or lower extremity paralysis.

Dr. Whitman said that he did not consider cases of injury to the spine as so uncommon as was generally believed. He cited four cases he had under observation of fracture of the spine, and noted that the case presented was one of traumatic origin.

Dr. Taylor said he did not think it fair to class the case among ordinary fractures of the spine. This case belonged to a distinct class of rare occurrence, and consisted in a sliding forward of the spinal column at the junction of the fourth and fifth lumbar vertebræ. It often occurred between the fifth lumbar vertebra and sacrum. He had seen only two similar cases, both in men, and one non-traumatic. In European literature the affection had chiefly been studied in women in connection with parturition.

Dr. Whitman said he did not mean to classify this case with those of ordinary fractures, which, as a rule, resulted in a kyphosis, but that he considered the case in question one of fracture displacement of traumatic origin.

Dr. Myers remarked that he had seen two cases, both traumatic. They were in women, and in one the pain was greatly exaggerated after the birth of a child, in the other after lifting. Both were relieved by the constant support of a spinal assistant brace with a broad abdominal band.

Dr. A. E. Gallant showed a model of the triangular pasteboard Van Arsdale splint. He stated that this splint was used in children in fractured femur with excellent results; he had reported thirty-three cases himself. It was light, could be adjusted, leaving the child in a comfortable position, and in young infants it was out of the way of soiling. The children were not confined to bed, but could sit up and play without hindrance. He cut a model and drew a diagram illustrating the manner of preparing the splint.

STERILIZATION OF THE HANDS.—A very effectual means of treating the hands before operation is described by J. Hahn (*Centralbl. f. Chir.*, Oct. 6, 1900) as follows: In running sterile water at about 40° C. with common yellow soap and sterile nailbrushes, the hands and forearms are scrubbed hard and systematically in four sittings of a few minutes each. After the second scrubbing the nails are cleansed and trimmed. Next there comes for four minutes immersion in a one-to-one-thousand solution of bichlorid of mercury in ninety-five per cent alcohol, followed by washing in a one-to-one-thousand or one-to-two-thousand watery solution of the same, until the alcohol is washed off. Finally, after the gown is put on, a rapid rinsing in the alcoholic solution is done, which may be followed by a superficial drying with a sterile towel, or, better, the hands may be left moist and the operation begun.—*Medical News.*

RETRENCHMENT OF LIPOMATOUS ABDOMINAL WALL.—J. B. Bullitt (*Annals of Surgery*, Nov., 1900) reports a case of very large umbilical hernia in a fat person whose abdominal wall was four inches thick in fat alone. He approached the neck of the sac through a horizontal incision about three inches above it. After the usual steps for radical cure had been taken, the incision was extended to each flank, where it was joined by another lower down. The interval between the two comprised several pounds of fat, which were ablated. The wound was drawn together by buried continuous catgut, deep interrupted silkworm gut retention, and, finally, catgut buttonhole sutures. Primary union in a scar twenty-two inches long and four inches deep, with cure of the hernia, resulted. The pendulousness of the abdomen was largely removed, although a still greater segment could safely have been taken.—*Ibid.*

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ADRENALINE, THE HAY-FEVER SUBJECTS' FRIEND.

With adrenaline in its present manageable state we may expect to at least make our hay-fever patient comfortable in one particular, that is, we will enable him to keep the nasal passages open, and we can also prevent him from having red eyes. Until the chloride of adrenaline made its presence on the market, other preparations were handled with difficulty and probably with some uncertainty. The chloride, however, seems to be uniform in its action, and can be relied upon. Its power to blanch the mucous surfaces is certainly very great.

In a recent case of traumatic keratitis, in which not only the cornea was involved, but the conjunctiva covering the sclera had been injured and was in a high state of inflammatory action, the engorgement was as great as it is possible to be without effusion. Two or three drops of the solution of the chloride of adrenaline, 1 to 5,000, instilled into the eye blanched the conjunctival surfaces within less than three minutes. This blanching remained fully one-half hour, when the agent was again applied with the same result, with the exception that the action was more prolonged.

In cases of edema of the larynx, this solution sprayed into the throat affords prompt relief, which lasts for a variable length of time,

from one to three hours. Its application to the nasal mucous membrane rapidly reduces its congestion, the relief being prolonged from forty minutes to three or four hours, depending largely on the condition of the mucous membrane; if much relaxation, the effect is less and the duration shorter.

I have not had opportunity to try it sufficiently in the hay-fever patients, but there is no question in my mind but what it will be the remedy by keeping the nasal passages open. The desiccated adrenals may be used one to five thousand in milk, sugar, or in combination with powdered borax of same quantity, and used as a snuff every two to three hours or as needed for the purpose of maintaining freedom of the passages. It enables us to do bloodless operations upon the nose, which, of course, gives much more space to work in and makes operative procedure in this locality possible, when it might otherwise be impossible or difficult, although sometimes free bleeding occurs several hours after the operation. It also enables us to do bloodless operations on the eyeball, and other minor operations on almost any mucous surface. I do not see why it would not be of great value in acute urethritis, and, in fact, it ought to be of value to the genito-urinary surgeon in many operations, as in the diagnosis and treatment of stricture, etc.

EPITHELIOMA OF THE PENIS; REMOVAL OF THE ENTIRE PENIS, SCROTUM, AND TESTICLES.—Grant Andrew, in *Glasgow Medical Journal*, reports a case. The first operation consisted of amputation of the organ in its posterior half. The circular method was employed, the urethra being divided three-quarters of an inch in front, slit up, and stitched to the tissue around. No attempt was made to cover the divided corpora cavernosa, owing to the septic condition of the parts. Examination of the removed portion showed it to consist of tightly compressed epithelial elements, taking entirely the place of the normal tissue of the glans penis. Nodules of typical epithelial form were found, containing laminated capsules, in the proximal portion of the penis in the corpus spongiosum. In the second operation the remains of the penis down to its attachment to the pubic arch, the entire scrotum, and the testicles were removed. The urethra was brought out in the perineum, fully an inch exposed, slit up and stitched to the surrounding skin. The patient made a good recovery and had no further difficulty in passing urine. The wound healed entirely.—*Albany Medical Annals*.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE PRESIDENT'S ANNUAL ADDRESS.*

BY JAMES H. LETCHER, M. D.

Mr. Chairman, Members of the Kentucky State Medical Society, Ladies and Gentlemen: It has become an established rule, co-existent with this organization, for the President to deliver an address at this time. When I see before me such numbers of distinguished men, men who could interest you more than I, and, above all else, who deserve far more than the speaker this great honor, I can but deeply wish some such one were now in my place. Even if not conscious of my inability to interest you, I would feel some timidity in addressing you here, where for long years has been and still continues to be the home of so many distinguished physicians and surgeons—Kentucky's gifted sons. Or how glad would you be to lift the veil of the past and listen to the eloquence of a Gross or Yandell, the wit of a Palmer, the philosophy of Drake, Flint, or Miller; but it has been decreed otherwise.

Will you not pardon me if I do not confine my remarks to some technical subject, and allow me scope to touch upon several thoughts that may prove of interest? First, permit me to express my most sincere thanks for the honor bestowed in electing me as your presiding officer, the greatest honor that can be conferred on a Kentucky doctor by Kentucky doctors. Our thanks are also due your Committee of Arrangement for the delightful preparation made for our comfort and entertainment, and to the Pathologic Committee for their large, interesting, and instructive exhibit. But, above all, let us thank our

* Read before the Kentucky State Medical Society, Louisville, May, 1901.

Creator, not alone for the manifold blessings he has showered upon the members of this Society during the past year, but upon our State and nation during all the years gone by, and, acknowledging allegiance to Him, pray that He may give us grace to follow always closely in the footsteps of the Great Physician.

The dense ignorance of the laity in all things pertaining to the healing art, and their credulity as regards the potency of so-called remedial agencies, renders it easy for the quack and nostrum vender to ply their varied avocations, and thus impose upon the masses.

Education is the only remedy for such ignorance, and it rests with the medical fraternity and all other educational organizations to form a combination and act in unison against the common enemy. I regard the great public press as the main factor in this work, as the newspapers go into the homes of all, and both our daily and weekly papers should set aside a column or two in each issue for the promulgation of medical knowledge. The public should be taught the laws of sanitation and warned against the dangers not only of the indiscriminate and inordinate use, but of the use at all of patent nostrums.

We are constantly reminded of the importance of a union of effort to aid in the defense of those who, in their endeavor to shield the public against the machinations of the quack and empiric, are made the defendants in suits in civil action, as well as a union to protect ourselves against unjust, iniquitous suits for alleged malpractice and against blackmailing schemes, etc.

Only last year, in an attempt to protect the reputation and honor of our profession, as well as the health, happiness, and comfort of his unsuspecting neighbors against a pretender, a member of this Society was forced, single handed and alone, to engage in prolonged and expensive civil action for damages. With a proper organization this suit would have proven a trivial matter, or possibly the plaintiff, knowing that the defendant would have both the financial and moral support of the united profession, would not have dared enter suit. Our co-worker deserves credit for the stand taken to uphold the dignity and good name of our calling, and we should feel it a duty and privilege to reimburse him, in a large part at least, for the outlay of money thus made.

And this case emphasizes the importance of our effecting a "Medical Defense Association," the object being to defend its members against blackmail, and not, of course, to render service to any

guilty of malpractice. To be eligible for membership in the Union, one should become a member of the State Society. This subject is receiving attention in many sections of the world, and I would suggest the appointment of a committee to take it under advisement.

A word touching the importance of a more complete general organization of the profession, or rather of a more vital connection between our existing medical societies. Beyond county organizations we do not need more medical societies, indeed could well dispense with several we have, but need a union, a oneness of those existing. There should be an intimate, a dependent relationship between our national, State, county, and municipal associations.

Several State societies have recently reorganized after the Connecticut method, the most approved plan, which in a word makes membership in the county or other local society carry membership in the State association, and that without additional expense. A plan is suggested for adoption by one of your former presidents, Dr. J. M. Mathews.

Among other important changes needed I will only mention that of separating the scientific and legislative work of the Society, so that the latter division would be composed of a much smaller and yet representative body. The various State societies, with the thought of reciprocity, should adopt constitutions and by-laws, made upon a common plan, differing in minor matters only, as the exigencies of local interests may require. So, too, this federative idea should hold as regards county and other local organizations.

The profession generally is awakening to the importance of strengthening the ties between the various societies, and to that end the "American Medical Association" at its last meeting appointed a committee on organization, having a representative from every State and territory in the Union, and a small committee of three (of which an honored member and ex-president of this Society, Dr. J. N. McCormack, Bowling Green, is Chairman) to formulate plans for the consideration of this large committee and of the national society.

If we still wish to keep pace with every improvement we must change our present methods, and a committee should be appointed at this session for that purpose and to co-operate with the "American Medical Association" in carrying out this general idea of reorganization.

In the years to come doubtless a president of this Society will mention the names of some of the distinguished medical men of the State

now living, who have done so much to bring honor and renown to Kentucky, not a few of whom are now in the sound of my voice. It would not befit this occasion for me to do so; but, entering upon this new century, I will cite a few facts (all of which perhaps are not generally known to the profession) in the lives of several of the leading pioneer surgeons of our State, who richly deserve to be remembered, not only by Kentuckians, but by the medical profession of the civilized world.

We seem to forget, or perhaps some do not know, that there is not a State in the Union that has done more, aye! as much, as has our grand old Commonwealth for American surgery. When we remember that at the beginning of the century just closed Kentucky as a State was but eight years old; that but twenty-six years before the first company of hardy emigrants, with Daniel Boone as their leader, settled at Harrodsburg, there was not a medical school on the continent save the "University of Pennsylvania," organized 1765, "Columbia College" (1768), Harvard (1783), and Dartmouth (1797), all great distances from here, and that we had no medical literature, it is marvelous what our forefathers accomplished.

In mentioning the names of a few of our many distinguished dead, with uncovered and bowed head I feel that I stand on holy ground, and am sorry that one with tongue more eloquent should not thus attempt to do them honor.

DR. WALTER BRASHEAR.

The subject of this sketch was born in Prince County, Maryland, February 11, 1776; married Miss Margaret Barr in Lexington, Ky., in 1802, and died in Louisiana, October 23, 1860, where he is buried.

His father came to Kentucky when Walter was eight years of age, settling on a farm on Salt River, near Shepherdsville.

The boy was given the best education possible at his home, and at the age of twenty years went to Lexington, matriculating at Transylvania University. Remaining in Lexington two years, he made the then long horseback journey to Philadelphia, where he entered the University of Pennsylvania. After one course of lectures in Philadelphia, a nomadic spirit carried him to the far eastern country of China, and while there he acquired considerable fame by removing a mammary gland from one of the female Celestials.

It was after returning to his native heath that he immortalized himself by doing the first successful amputation at the hip-joint in

America, and perchance the first in the world. This operation was performed on a seventeen-year-old mulatto slave boy in Bardstown, August, 1806, the boy living for many years subsequently.

Dr. Brashear practiced the circular method, securing the blood-vessels, then making an incision over the major trochanter and bringing the head of the bone through this opening.

We can well imagine the courage necessary to undertake at that time, and with such surroundings and assistance (practically no skilled assistants), so great an operation.

Dr. Brashear moved to Lexington in 1813 and soon attained distinction in his profession, but remained there only nine years, when he went to St. Mary's Parish, Louisiana. Here, seeking his fortune as a planter and merchant, both proving financial failures, and engaging

somewhat in politics, he abandoned his profession, only rendering service occasionally to his neighbors, and then gratis.

He represented Louisiana in the United States Senate, and was a man of great professional and personal popularity.

EPHRAIM MCDOWELL.

The one man who brought the greatest fame to Kentucky, by whose deed a greater number of years have been added to human life than by the work of any other surgeon, dead or living, was Ephraim McDowell.

The introduction of the religious teachings of Charles the First of England were so objectionable to Scotland that in 1638 that grand body of men known as Covenanters was organized, and from this stock came Dr. McDowell. His father, Samuel, was born in Virginia, October 29, 1735; married Mary McClung; distinguished himself in the Revolutionary War, and was appointed by General Washington the first Marshal of Kentucky. Dr. McDowell's family possessed elements of worth. His brother, John, was an officer in the War of the Independence as well as the War of 1812. His brother, William, was United States Judge for the District of Kentucky, and married Margaret Madison, sister of James Madison, ex-President of the United States. His brother, Joseph, was an officer in the War of 1812, and General Shelby's Adjutant-General at the battle of the Thames in Upper Canada, where Tecumseh, the celebrated Shawnee Chief, was killed. His sister, Martha, married Colonel Abram Buford, of Revolutionary fame; his sister, Mary, married Alexander Keith Marshall, brother of the late John Marshall, Chief Justice of the United States.

James G. Birney, who was the abolitionist candidate for President in 1844, and whose nomination resulted in the defeat of Henry Clay, the candidate of the Whig party, married Agatha McDowell, a niece of Dr. McDowell.

Dr. McDowell possessed an excellent physical constitution, being a trifle less than six feet in height, had a striking face, black hair, ruddy, healthful complexion, elevated and rounded forehead, heavy arching eyebrows, rather large dark eyes, nose inclined to be heavy but well proportioned—a blending of the Grecian and Roman—a somewhat large, expressive mouth, and a broad, well-shaped under-jaw. Although being heavier than the average man, yet during his whole life he was brisk and active. He was a man of rare simplicity of character; one of

his most striking peculiarities being quite a modest estimation of his own worth, having no desire whatever for power or fame, and seeming to be content in performing, in the best possible manner, the duties of every-day life. Not only was he perfectly free from that stiff, unbending reserve so often met with in men of genius, but evidently lacked that air of dignity which should adorn one of his character and profession. He possessed a happy disposition, brilliant wit, polished manners, generous feelings; was a kind father, indulgent husband, and excellent citizen.

Dr. McDowell's advantages for acquiring even a common school education were not great, and from the style of his writings, as appeared in his only three contributions to medical literature, we infer that his early education must have been limited. He attended private schools in his own and neighboring counties, and the honorary degree given him by the University of Maryland in 1825 was the only degree it is positively known that he received.

He spent several years at Staunton, Va., as a student of Dr. Humphrey, who was a graduate of the University of Edinburgh, and went from there to Edinburgh himself in 1793, matriculating at the same university. There he became also a private pupil of the eloquent and earnest Mr. John Bell, and it is said that the latter gentleman inspired Dr. McDowell with the idea that the operation that afterward made him famous might be accomplished. After two years in Scotland he returned to his old home in Danville.

In 1802 he was married to Sarah, a daughter of Kentucky's first Governor, Isaac Shelby, an accomplished, amiable, and estimable lady, who was in every way fitted to make his home attractive. She was granted the privilege of administering to his happiness and comfort during the remainder of his life, surviving him about ten years.

I will not speak at length of the operation, the crowning achievement of his life, and that made Dr. McDowell's name familiar with the medical profession all over the world; suffice to say that in 1809 he successfully removed an ovarian tumor weighing $22\frac{1}{2}$ pounds. The patient was Mrs. Crawford, age forty-seven years, of Green County, this State, and she lived for thirty years afterward; and because of this procedure he has been justly known as the "Father of Ovariectomy," as he was the originator of abdominal surgery. (Mrs. Crawford's son afterward became Mayor of the city of Louisville.) The old house where Mrs. Crawford was operated upon still stands in Danville, and I

had the pleasure but a few days since of being shown the very room where the first ovariectomy was performed. The proof of Dr. McDowell's claim for priority in this procedure is so conclusive no fair-minded man can doubt it. The total number of such operations known to have been performed by him were thirteen, with eight recoveries.

Dr. McDowell did a large and select practice, much of it being general surgery, and was oftentimes called long distances from home. He operated a number of times for vesical calculi. One of his clients, then in 1812 a young man, James K. Polk, of Tennessee, afterward became President of the United States. He was elected an honorary member of several medical societies, owned a good library, and kept well abreast of the profession.

From an early day he possessed thorough Christian convictions, but did not become a member of a church until 1828, then joined the Episcopal Church. He was, from its organization, an earnest supporter of the Presbyterian College, "Center," in Danville.

Dr. McDowell was a native of Virginia, born in Rockbridge County, November 11, 1771; died at Danville, June 25, 1830, where his remains rest on a square of ground given by that city, and under a handsome monument erected by the women all over the country who have been blessed because of his work, and by others who love to revere the memory of the great and good.

In the whole history of medicine none can be found more deserving of our admiration and love than McDowell. We can look back and see no brighter star in all the medical galaxy than was he. It was the luminous glance of his genius, "like the splendor of the golden bough that bore the Trojan hero through the darksome regions of the nether realms," darting through the branches of the tree of medical knowledge gilt with a new light the sombre leaf of ovarian disease.

DR. CHARLES MCCREERY

Was of Scotch-Irish descent, his grandfather, John, coming to this country and locating in Maryland in 1720. His father, Robert, moved to Clark County, Ky., where the subject of this sketch, the seventh son and youngest of nine children, was born, June 13, 1785.

Dr. McCreery was an uncle of the late Senator Thomas C. McCreery, and great-uncle of ex-Gov. James B. McCreery. He married Ann Wayman Crow, of Maryland, and settled in Hartford, Ohio County, where he spent the remainder of his life. Dr. McCreery did a large

practice in Ohio and adjoining counties, making extended rides horse-back, and yet found time to deliver lectures regularly in his home to his own students as well as students of others. His surgical instruments were made under his own supervision by an expert silversmith in Hartford.

His chief operation, the one that makes his fame enduring, was extirpation of the entire collar-bone in 1811, the first of which record is made.* This operation was done upon a young man, and though the bone was said to have been scrofulous, was a decided success, the patient making a perfect recovery with perfect use of the arm and living past middle life.

The case of Dr. Valentine Mott, of New York, performed in 1828, which Dr. Mott supposed was the first operation of the kind done in the United States, and about the wonders of which surgical writers at that time said so much, was not a complete removal, for about one inch of the acromion end of the clavicle was left.

Dr. McCreery was a fine historian, a great reader, eloquent speaker, ready writer, and close student. The love of his patients for him bordered on idolatry, his name being to them a synonym of kindest sympathy and readiest helpfulness. His home life was characterized by unusual sweetness and tenderness, and an intense appreciation of child nature. He was a finely-formed, handsome man with noble brow and fine dark eyes.

Dr. McCreery died of cardiac dropsy August 27, 1826, at West Point, on his return from Shelbyville, where he had gone to bring his two oldest daughters home from Science Hill Academy. I have had the pleasure of visiting his grave at Hartford, which is handsomely cared for by his grandchildren, and he need not to have uttered the prayer, "Lord, keep my memory green."

BENJAMIN WINSLOW DUDLEY,

of Lexington, known as the greatest lithotomist of the nineteenth century, the "Surgical Patriarch of the West," was one of the most distinguished surgeons of his day. He was one of the organizers of the Medical Department of Transylvania University, its master spirit, and its Professor of Anatomy and Surgery. He was also, in 1850, the founder of the Kentucky School of Medicine, having organized its faculty, of which he remained a member for several years, and remained

*Case reported in full by Dr. Johnson in January, 1850, number New Orleans Med. and Surg. Journal.

with it until he was sixty-five years of age (1857), when he moved to his farm to pass the evening of his life.

After graduating at the University of Pennsylvania in 1806, he spent several years abroad, most of the time in London and Paris, where he gave especial attention to surgery, as taught in the schools and hospitals of those medical centers. He returned to Lexington, which place was soon recognized as the seat of learning of the West, not only medical, but legal and clerical also; the home of Robertson, the Breckinridges, Clay, and others.

While Dudley did general surgery, treating especially and successfully traumatic epilepsy by trephining, his chief field of labor was with the bladder. He did two hundred and twenty-five lateral cystotomies for vesical calculi with the loss of but three patients, not having a death in his first one hundred cases. Judging from his method, one must believe that he had a clear perception of asepsis and antisepsis. His chief reliance was upon thorough cleanliness, the free use externally of warm, almost hot, water that had been boiled, and internally of what he supposed was pure cistern water. An Englishman, alluding to Dr. Dudley, is said to have remarked "that it had been reserved for a backwoodsman of America to teach how to prepare the patient for a capital operation. He justly claimed to have first cured a case—and it was a formidable one, too—of intracranial aneurism by due preparation and ligature of the carotid. No one ever did so much with the roller, relying upon it even in fractures, of which he was emphatically the master."

He contributed but little to medical journalism, was accurate in diagnosis, of fine mental equipoise, gentle and kind, yet resolute, and of a quiet temper. Dr. Dudley was born in Virginia in 1785, the same year that gave birth to Dr. McCreery, and died in Lexington, January 20, 1870, where rest his remains.

Aside from these, many other of the earlier members of our profession became eminent, but time and your patience will not allow me to tell you at length of Dr. Allen Goldsmith, who, in Lincoln County, in 1829, performed for the first time in the United States lithotripsy; of Dr. John M. Briggs, of Bowling Green, who in 1830 for the first time in this country did hysterectomy; or of Dr. Mosely, whom Dr. Ely McClellan, of Philadelphia, told me carried out the principle of "Esmarch's bloodless operation" about sixty years ago; or of Dr. Benjamin G. Bowman, of Harrodsburg, to whom may almost safely be given the

credit of inventing the hypodermic syringe, the use of such an instrument by him as early as in 1824 having been witnessed by Dr. C. S. Abell, aged eighty-four years, still living; or of Dr. Joseph Taylor Bradford, of Augusta, who was the most successful ovariologist of his day, 90 per cent of his cases during that early period (1840-70) recovering. Still other surgeons have acquired distinction, and I will merely give you the following names of a few of the many, but it would be impossible to do it in the order in which they deserve mention. Most of them are products of Kentucky soil, while others spent a great portion of their lives with us: Samuel D. Gross, Joshua Barker Flint, George Wood Bayless, James Miles Bush, T. G. Richardson, Ethelbert Dudley, John Daviess Jackson, David Wendell Yandell.

As a matter of historic interest, I will say that Dr. William Loftus Sutton, of Georgetown, was the first President of this Society, in 1851. Dr. John Lawson McCullough, of Lexington, was the first to receive the M. D. degree from a school west of the Alleghanies, that being from Transylvania in 1809. Dr. Hart was the first doctor known to have come to and settled in Kentucky, he from Maryland in 1775, to Harrod's Station, and later to Bardstown.

These great intellects were held in high esteem in their respective communities, and there could not have been found then, as now, men in any calling who were truer, bolder, yet conservative, more noble, more self-sacrificing, more progressive, more devoted to their country, more earnest in their desire to benefit mankind. They shall ever continue to live in history, because by their deeds they did something for the welfare of their fellow-men. All these add luster to Kentucky's fame, and from the light of their genius we should find inspiration to emulate them in their labors and accomplishments. Let us, with well-directed and untiring zeal, with an earnest purpose born of a desire to be of service to those now living and to come after us, labor to become worthy successors of these great men who bore the burden and heat of the day.

Though so much has been accomplished during the century just closed, we stand at the early morning of possibly the greatest epoch in the history of our calling, and to the men young in the profession at the beginning of this century I would suggest that if you will wear well the mantle—as did Elisha that of Elijah—of these great men gone before, you must “spurn delight and live laborious days. To you an inspiration comes from the graves of the dead and from the deeds of

the living, kindling hope and ambition to emulate their fame and to do their works, or even greater work."

If you do not want to go down in the battle of life with the army of unnumbered names, then work, work, and write your name high in the temple of fame. Live for others, remembering that "nothing in nature, much less conscious being, was ere created solely for itself," and let the world be better for your having lived.

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HENDERSON, KY.

SOME OBSERVATIONS ON ADMINISTRATION OF ANESTHETICS.*

BY B. C. FRAZIER, M. D.

In introducing such an important though time-worn topic, I do not feel it needful to offer any apology, for such a vital subject should be discussed often and freely.

I will speak more particularly on chloroform anesthesia, and try to give some good reasons for preferring it to ether, though not trying by any means to decry the use of ether. In certain cases, and in the hands of men who have not had chloroform anesthesia training, I deem it wise that they should confine themselves to the one with which they are most familiar and in which they have most confidence.

The preparation is very important where the operation will be of sufficient magnitude to necessitate the patient's keeping in bed for some time, and where there will have to be a restricted diet. The best possible condition of the stomach and bowels is imperative, and to obtain this condition the subject should not be prepared too hastily. Where there is no immediate hurry, three days should be given up to the preparation of the patient for surgical operation and general anesthesia; a mercurial purge should be given on the first day, followed by a saline. Liquid diet should be observed from the first, and a colon douche or a high enema given on the night previous to the operation, with a low enema on the morning of the operation to relieve the rectum

* Read before the Louisville Medico-Chirurgical Society, May 31, 1901. For discussion see page 21.

of any possible retained feces that might be expelled under the relaxation of the anesthetic. Very often the patient is only partially prepared, and nausea is dependent on the general condition of the patient as much or more than on the anesthetic. All of you have had disagreeable experiences from the patient's involuntary movement of the bowels. This can be avoided by the more careful preparation, as just outlined. The anesthetist should have clean hands.

In beginning the anesthesia care should be exercised to have every thing in the way of foreign bodies removed from the patient's mouth; the neck- and waist-bands should be loose, and the patient be made as comfortable as possible; usually a small pillow should be allowed for the head. In arranging the patient and asking as to the comfort and other questions that naturally arise, you get the subject's attention and become somewhat acquainted, if you have not had opportunity to do so before. The Esmarch inhaler is the most satisfactory instrument in administering the chloroform, for you can hold the inhaler some distance from the face and begin by a single drop, and the patient can be brought under the chloroform in this manner usually without either the stage of excitement or primary nausea.

It is well to constantly assure patients you will be careful, and will not cause them any discomfort, and that he or she will not realize that they are going under, because it will be so gradual. If your patients are very restless and nervous, have them converse with you, or count with you. You then keep, to some extent, their fears calmed, and they breathe more evenly. By all means never begin by telling patients to take long or deep breaths, for if there is considerable vapor to come in contact with the fauces they are very apt to cough or strangle, thus making them more fearful, and they will not breathe freely any more during the primary stage. Ask them to breathe just as though they were lying down for a nap. By beginning the chloroform very slowly, that is, a single drop at a time, with the inhaler some distance from the face, you do not allow enough vapor to be given off to irritate the fauces, and thus do not cause an excessive flow of saliva and consequent cough.

Time is not worth more than the comfort and safety of your patient, and by slowly inducing anesthesia you are very much less likely to have any alarming symptoms arise. I usually take from ten minutes to a quarter of an hour to get surgical anesthesia.

It is my custom to have a wet cloth put over the eyes in the begin-

ning to prevent the irritating effect of the vapor. In hot weather have a cold, wet cloth; in cold weather have a hot one; you thus make it comforting to the patient and keep the eyes closed, thus keeping them more quiet. The room should be quiet, with as few present as possible—of course the nurse or some other attendant should always be present. It is dangerous to give an anesthetic without assistance. The patient should not be moved any further, while under the anesthetic, than can be avoided. The anesthesia-room should be adjoining the operating-room but not connecting, for the talking and general noise during the preparation are often the cause of alarm and great nervousness on the part of the patient.

The patient should be fully under the effects of the chloroform before the surgeon is allowed to begin, for the attending shock is much greater than if you have your patient fully anesthetized. With the corneal reflex abolished or blunted, with the pupils smartly contracted and not dilating to light, with the easy sighing respiration, is considered evidence of complete anesthesia. I think it rather bad practice to put your finger on the cornea, as you may thus do some injury to the eye.

I make it a rule to wash up thoroughly before beginning the anesthetic, to avoid any possible chance of infecting the eye from my finger. I consider the eyelashes more sensitive than the cornea, and there is less likelihood of doing the eye any injury.

When the operation involves tissue that is the seat of inflammation, anesthesia has to be more profound than where normal tissue is gone through. Tubercular patients do well under chloroform, and in tubercular empyema necessitating extensive operation the patient is not a bad subject for anesthesia unless there is leakage upward into the upper air-passages, which may cause coughing and strangling. I have noticed that patients operated upon in the Sims position all do well, and even those who have to lie directly on the chest and belly. I have always attributed this to the fact that the position rather hindered deep respiration, believing when chloroform is inhaled slowly that the stage of anesthesia is more tranquil and less liable to be carried to a dangerous point. The Trendelenburg position is favorable in some cases and very unfavorable indeed in others. Where there is feeble circulation, and the patient is small and thin, without very abundant abdominal contents, the Trendelenburg position is not contra-indicated; but when there is a large abdominal cyst, or where there is a large amount

of fluid free in the cavity, the lowering of the head may mean a serious affair. The whole weight gravitates against the diaphragm, the lungs and heart are both impinged upon, and the circulation and respiration are both very much interfered with.

I have given chloroform several times in the reclining posture when the patient could not assume the recumbent posture, and while I have not met any interference, I would not by any means recommend it; on the other hand, would advise against it if there be any possible way to avoid it.

There is less danger in anesthesia given in disease than given for repair of injury. The injury has already produced shock which the slow or very rapid onset of disease has not produced, and consequently the anesthetic is not so well borne. Chloroform is the ideal anesthetic in head injuries or brain operations; also in labor. I may have my faith more closely pinned to chloroform than I should have, but in more than six hundred cases of chloroform anesthesia I have had but two cases that caused me serious alarm.

The first case was in a boy, aged eleven years, from the mountains of Kentucky, at the Children's Hospital. He had a clubfoot of traumatic origin. The morning of the operation Dr. Vance asked me if I had examined the heart thoroughly, and if not, he insisted that I do so. I remarked that the boy had been climbing about the mountains on a crutch, and there could hardly be any thing the matter with his heart. However, I made a careful examination, and nothing abnormal was discovered. The boy was put under the influence of chloroform, and, as usual, Dr. Vance asked me if he was ready. I said that he was, and the operation had been scarcely commenced when I asked him to desist, as the boy had gotten pale, respiration had ceased, and his jaw dropped. He looked like one dead. I drew his head back over the edge of the table, and, if I remember correctly, Dr. Vance raised him up by the heels; we practiced artificial respiration for a few minutes, injected nitro-glycerine, etc., and the boy in a short time had recovered. No further operative steps were undertaken that day.

About ten days later chloroform was again administered, and the boy took it as quietly and evenly as any patient I ever saw. The operation was quickly and successfully completed. It developed afterward that this boy was the subject of periodic "fits," and that the nurse had seen him in one or two attacks while in the hospital. I believe now that he had one of these attacks (probably epilepsy) while the anesthetic was being given for the first operation.

The other case was in a woman who had lost a large amount of blood, and an operation was performed with the patient lying on a bed. Suddenly she became pale and respiration ceased. After a few minutes' artificial respiration, without the injection of any heart stimulant, she was revived, and the operation was proceeded with. There was no further trouble. I afterward found that she had formerly been under chloroform on two occasions for surgical operations, and the surgeon had to discontinue because she could not take chloroform. I did not know this before I began to give her chloroform.

The question has not been fully settled in my mind as to the mode of death from anesthesia, and I am very much inclined to think the cause of death is not always the same. I have never seen a death from chloroform anesthesia except in dogs, and all of these ceased breathing before the heart quit beating. I have killed several dogs with chloroform, and it has always required several minutes, though I had one to die in another's hands, while I was preparing for operation, inside of two minutes. The conclusions of Hyderabad Chloroform Commissions on this point are thus clearly expressed:

"The inhalation of chloroform vapor, no matter in what doses or in what manner carried out, can not kill a dog by acting directly upon its heart. We must invariably affect the nervous mechanism of respiration before involving the cardiac centers of the medulla oblongata or affecting the contractions of the ventricles and auricles to any extent. The commission further consider that chloroform vapor administered to dogs never kills by acting on the intracardiac ganglia, either primarily or secondarily. It is impossible to produce syncope from chloroform in dogs. The commission are of the opinion that in the dog the danger of life from chloroform inhalation arises only when the cells of the respiratory centers (both respiratory and expiratory) of the medulla oblongata have their functions interfered with."

These positive assertions of the first Hyderabad Chloroform Commission were the outcome of carefully and ably conducted experiments on one hundred and forty-one dogs in the year 1888. They were so opposed to clinical evidence, and the results of the experiments of the Glasgow Committee and others, that their deductions were not generally accepted as applicable to man. A second Hyderabad Chloroform Commission was held in the following year. The experiments numbered five hundred and eighty-eight. They were conducted chiefly upon dogs and monkeys on thoroughly scientific principles, and "were

designed to show the effect upon the blood-pressure, heart, and respiration of the inhalation of chloroform, ether, and the A. C. E. mixture, administered in various ways and under varying conditions." The results of this commission were the same as those of the first.

In quoting from Bartholow on the same subject, we have as follows:

1. By the first mode, the death is sudden and occurs very soon after the inhalation has begun, and is ascribed to "irritation of the peripheral nervous system, accumulation of carbonic acid in the blood, and arrest of the action of the heart." This explanation, the author submits with diffidence, seems very unsatisfactory, for phenomena of this kind, up to the point of cardiac paralysis, must ensue in all cases of chloroform narcosis. The sudden death at the beginning of inhalation seems to be more properly explicable on the theory that the first chloroform vapor which reaches them paralyzes the cardiac ganglia, already in an abnormal state of susceptibility from causes not now understood, for this accident sometimes occurs in persons who have previously taken the anesthetic without unfavorable symptoms of any kind.

2. By the second mode, called by Richardson epileptiform syncope, death ensues in the stage of rigidity preceding complete muscular relaxation, and is due to tetanic fixation of the respiratory muscles, and consequent interference with the pulmonary circulation, accumulation of the blood on the venous side, and arrest of the heart's action. In these cases respiration ceases before the pulsations of the heart cease.

3. By paralysis of the respiratory muscles. Death ensues during the stage of complete muscular relaxation, and the action of the heart continues for some seconds, or even minutes, after respiration has ceased.

4. By paralysis of the heart. This also occurs in the course of complete insensibility; the motor ganglia are paralyzed, and the heart suddenly ceases to act, the respiration continuing for a short time longer.

5. This mode of dying is made up of two factors: Depression of the functions by chloroform narcosis and the shock of the accident or the surgical operation. Death may ensue during the inhalation, or may occur afterward.

An anesthetic should never be begun unless there has been made every preparation for resuscitation. For shock attending the operation hot applications over the chest are first in importance. Heart stimu-

lants, such as whisky, strychnia, nitro-glycerine, and atropine, are valuable, and each has its place in suitable cases. Nitro-glycerine is the most rapid of the above named drugs, to be used hypodermatically. Nitrite amyl is safe if used carefully, and is the most rapid of all heart stimulants.

I do not consider chloroform a heart depressant if given in proper amounts and administered slowly. Organic heart disease is no barrier to the use of chloroform unless there is dilatation of the heart without hypertrophy. There should not be given any thing into the stomach immediately before beginning the anesthetic. It is sure to cause vomiting. When vomiting does occur, don't withdraw your anesthesia if you are sure there is no food in the stomach. It only prolongs the time, and there is no danger if there is no food to be regurgitated into the air passages. Push the anesthetic and the vomiting will cease. It is an admirable plan to keep the hand under the jaw to keep the tongue up in the mouth. I have never had a case where the tongue was swallowed.

In conclusion, chloroform is more pleasant to inhale than ether, and more rapid even when given slowly enough to make it pleasant; old people bear it better than the middle aged, as do also children. It is less likely to cause nausea; is less irritating to the kidneys. It can be given where it would be dangerous to give ether (I refer to where there is an open flame). It is in my opinion not more dangerous when given by a man who is wide awake, careful, and has good judgment, and one that does not care more for what the operator is doing than what he is doing himself.

A drug that is regarded by most authorities as the best heart stimulant and equalizer of blood pressure is atropine. There is one great objection to this, viz., in abdominal cases, where you do not want to give the patient any thing to drink for some time after the operation, it makes the mouth and throat so dry that it is almost unbearable. Otherwise it is one of the best drugs that we have for use in depression of the heart or the circulation when chloroform is being administered.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, May 31, 1901, the President, T. L. Butler, M. D., in the Chair.

Bright's Retina. Dr. J. M. Ray: The patient I wish to present is a man aged thirty-one years. He came first to the University Dispensary with the history of dimness of sight and headache. He said these headaches had been persistent for several months, and that recently his sight began to become dim. He first presented himself during the month of April of this year, and Dr. Lederman, who had charge of the clinic, asked me to look at him. I examined him, and we then turned him over to the medical clinic for treatment. Since then he has been under the care of Dr. Blitz.

The man was in good health up to the time he began to suffer with headaches, but since that time he has gone down rapidly. He presents a most typical picture of Bright's retina. I have his pupils partially dilated with atropine, and as we have several times had the subject up for discussion before this Society, I thought it might be interesting to have the patient come before you. His vision is about $\frac{1}{10}$, but he says it has gotten a little better recently.

The diagnosis of Bright's disease was not made until the eyes were examined with the ophthalmoscope. I brought for your examination an atlas of ophthalmology, which contains several pictures illustrating this condition, and two of them, which I show you, resemble very much the picture of this man's eyes as seen by the ophthalmoscope.

Discussion. Dr. T. C. Evans: The case presents a beautiful illustration of Bright's retina. It is a little strange that the so-called typical cases, as laid down in our text-books and atlases of this disease, are really the rare ones. I have seen very few that conformed to the pictures given in our text-books. This case shows the spots plainly, but does not show the stellated appearance around the macula given in all text-books on the subject.

Dr. William Cheatham: This is a typical case of Bright's retina, and it is especially interesting, inasmuch as the diagnosis was made by the ophthalmoscope before the condition was recognized by the family practitioner. This is rather a common occurrence.

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

I have seen a good many of these cases; one was the case of a prominent judge whose wife is now living in this city. He had been under the care of Dr. Hammond, one of the most noted neurologists in the country, for some trouble, and when he returned here he complained of loss of vision, etc. I examined his eyes, and found he had typical neuro-retinitis. He lived but a few months.

Another similar case was a prominent manufacturer of this city. Such cases are always interesting, because of our ability to make the diagnosis with the ophthalmoscope. In these typical cases we can make the diagnosis beyond any doubt with the ophthalmoscope; some of them, however, may simulate other conditions; for instance, the anemias and the other condition that we sometimes see in diabetes, but we often have associated with diabetes involvement of the kidney. In a typical case like the one presented a mistake could hardly be made with the ophthalmoscope. I do not believe, however, that the changes in the retina indicate the amount of change in the kidney, or the approaching termination of the disease. There may be a small hemorrhage or a small spot of fatty degeneration, yet it may indicate an early death. The prognosis can not be made by the amount of change in the retina, but by watching the progress carefully the prognosis can be made as to termination with a fair degree of certainty.

Dr. J. G. Cecil: This subject has been emphasized so often that it is hardly necessary to discuss it further before this Society; yet Dr. Ray and myself now have under observation a widow who has the general appearance—the urinary symptoms and gross appearances of Bright's disease—with dimness of vision, yet I do not believe he has ever demonstrated any change about the retina as far as the ophthalmoscope is able to reveal it. It is a very interesting line of observation to me, and I have always taken occasion to have my own opinions verified by the oculist in this class of cases.

I would like to ask Dr. Ray, or some of the other oculists present, if there is any especial tendency to ocular change in any particular kind of Bright's disease; that is, whether it varies much between the parenchymatous or interstitial varieties.

The case to which I have referred has been of unusual interest to me, because the lady in question has for a long time, many years, suffered from edema of one leg and not the other; but only recently has she shown any urinary symptoms, unmistakable evidences of Bright's disease. She improves under treatment directed to that special feature

of her case, yet she has decided dimness of vision. I saw her this afternoon, and she is getting gradually worse, and yet Dr. Ray has never been able to demonstrate any change about the retina.

Dr. J. M. Ray: In the case I have exhibited the examination can be so easily made that I thought the members, outside of the specialists, would be interested, is my reason for bringing the man here. Interstitial Bright's disease is the form in which the fundus is most likely to show the characteristic changes. Dr. Blitz, under whose care this patient has been, has taken considerable interest in the case, and has examined the urine a number of times. I expected to have his analysis, but it was overlooked. The prognosis in this case is unfavorable; I believe the man will live but a short while.

Dr. William Cheatham: I think I have mentioned before this Society on several occasions a most remarkable case of this kind, the patient being under the care of Dr. Cottell, in which the ophthalmoscope showed changes in the retina at least six months before there were any urinary symptoms. Dr. Cottell examined the urine time and again without finding any thing to indicate Bright's disease. The patient lived but a short time after development of symptoms referable to the kidney. It is in the interstitial or contracted form of kidney that the retinal changes are most often observed. The prognosis is always bad, as retinal changes do not often occur until late in the disease. Patients do not, however, always die promptly. I have seen one case where the patient lived eight or ten years after the appearance of changes in the retina. It is also remarkable, in some cases, that extensive changes in the retina may exist, and still the patient have almost perfect vision.

The essay of the evening, "Some Observations on Administration of Anesthetics," was read by Dr. B. C. Frazier. [See page 12.]

Discussion. Dr. A. M. Vance: I know very little about the practical administration of the anesthetic; I have performed this function but few times, and this has usually been when I was alone in emergency cases. I have always been a chloroform man, probably because I have always had a gentleman as anesthetist who understood the administration of chloroform better than he did ether, and I have never lost a patient on the table when chloroform was administered as the anesthetic. I have seen but two deaths on the table in my own work, and in both of them ether was the anesthetic, and both patients died

from shock. I do not believe the anesthetic had any thing to do with it.

I agree with Dr. Frazier that his method must be good, because probably in the vast majority of his six hundred cases the anesthetic has been given for me, and I feel perfectly at ease when I have him at the other end. And it is the greatest factor in the world for the surgeon to feel that he has some one at the other end upon whom he can depend; that he can go ahead with his part of the work without worrying about the anesthetic. I know of no more distressing position in which the surgeon can be placed than to have somebody in whom he has no confidence as the anesthetist. I believe chloroform is the safer anesthetic in proper hands.

Dr. T. H. Baker: I will briefly relate two cases in my own experience, one in which Dr. Dabney was to enucleate the eye of a phlegmatic, beer-drinking German who was never gotten beyond the stage of excitement. Whenever I attempted to bring him beyond that point he would stop breathing. After we inverted him four or five times and then resumed the anesthetic with the same result, the doctor finally enucleated the eye without going any further.

The other case was a man in the second stage of consumption, and a competent surgeon was going to perform a hemorrhoidal operation. The surgeon in this case became more frightened about the actions of the patient than anybody else, and absolutely refused to proceed with the operation that day. The following day the patient took the anesthetic as nicely as any one I ever saw, and the operation was completed without trouble.

I have never seen ether administered except in the East, where it seems to be used exclusively, and where they apparently give it without the least thought about any danger, and, it seems to me, in a very careless and haphazard way, a student being frequently brought down to administer the anesthetic. I do not like ether, either in immediate or after-effects, as well as chloroform.

Dr. L. S. McMurtry: Dr. Frazier has given us a very interesting paper, and it is especially valuable because he has selected the most important points after a very large experience in the administration of chloroform, and certainly the subject is one which can never cease to possess interest, and its repeated discussion is bound to be profitable to us all.

One of the great difficulties encountered about the administration

of anesthetics, both chloroform and ether, is that this subject is greatly neglected in our system of medical education. Students, as a rule, are not practically instructed in the administration of anesthetics, and unless a man has the advantages of service as interne in some hospital, or happens to have the good fortune which Dr. Frazier has had early in his professional experience, the association with an active, careful surgeon as anesthetist, he has no practical knowledge when he begins in the profession of the use of anesthetics. I believe it ought to be the case in every medical college which has connected with it a hospital, as all medical colleges now have, that there ought to be a practical system of instruction on anesthetics, where an experienced anesthetizer like Dr. Frazier might take fourth-year students with him, stand over them and show them how to administer the anesthetic. That ought to be part of the fixed curriculum of study in every medical college.

Dr. Frazier has limited his paper to chloroform, which is the most popular method of anesthesia; but I have seen ether given a great deal, and have given it myself for several years. Here in Louisville, and in the South generally, under the influence particularly of the teaching of the elder Gross, who molded professional opinion on these subjects very much in the earlier years of the present generation of surgeons and others of his pupils, ether is not as favorably regarded as it deserves to be. We have ideas about it that I am satisfied in many instances are incorrect. Take, as an example, the idea that ether is so dangerous to the kidneys. This is incorrect. But, as stated by Dr. Vance, if a man knows how to give chloroform and knows nothing about the administration of ether, of course chloroform in his hands will be the safer anesthetic. If a man is accustomed to giving ether and knows nothing about the administration of chloroform, then, of course, ether will be the safer. There is almost no similarity between the methods of giving these two anesthetics.

In the first place, we will find there is a great difference in the subjects to which anesthetics are given. Women take anesthetics much better than men, as a class; children usually take anesthetics well. I do not know exactly why it is that women take anesthetics better than men, unless it is that men are accustomed to habitual drinking, which is far more common with men than with women; such men do not take anesthetics well. Take a man who is given to his daily dram, and you will find him an exceeding bad subject for anesthesia, and the stage of

excitement will be prolonged. Another reason is that women trust themselves more completely to the surgeon after they make up their minds to have an operation performed than do men. They lay aside all idea of helping themselves, all idea of watching the progress of the operation; they give themselves up more than men do, and consequently the element of fright is more eliminated, and this of itself is a great element of danger.

Dr. Frazier has spoken thoroughly of the preparation of the patient, which is so frequently disregarded. I especially wish to emphasize his remarks on that subject, particularly the three days' preparation spoken of where this is possible, in order to have the patient prepared to take the anesthetic. In the preparation of the patient the instructions he gives are of the greatest importance. The patient should have a brisk cathartic; the alimentary tract should be thoroughly emptied; the patient should have an abundance of water, so as to place all the emunctories and eliminative organs, skin, and kidneys in good condition; the patient should have warm baths so as to empty the skin and deplete all congested blood vessels of every part of the system. We know how common it is to send a patient to the hospital one day and operate upon him the next. Such a patient will usually be found very troublesome. The diet should be carefully looked after; all vegetables should be interdicted, and every thing depleted by elimination.

It is important that there should be perfect quiet about the patient when the anesthetic is administered. I believe the psychological condition is a large feature in the danger from the anesthetic. If it is possible, the patient should not be anesthetized in the immediate vicinity of the operating-room; the patient should not be allowed to see the assistants in gowns, nor any of the paraphernalia of surgery which we as surgeons see every day and are accustomed to handling, but to those unaccustomed to them they are frightful. The greatest danger to a patient who is going to take an anesthetic is fright. We should, therefore, have the patient under conditions that are peaceful, where there is nothing about to suggest danger. The anesthetist should cleanse himself thoroughly; put on a washable coat, and be in a condition to protect the patient from infection in every way; and then he should go into the room quietly and always examine the patient before commencing the anesthetic; even if he is satisfied about the patient's condition he should examine the heart, etc., in order to eliminate the question of fright. Every surgeon here knows that, no matter how serious the

surgical operation to be undertaken, the patient will invariably tell him "I do not have any fear of the operation, it is the chloroform that I am afraid of." They are in a state of alarm about that all the time. They know there is danger in it; they have all heard about it. This element is always present, and can be dissipated by a little tact and patience on the part of anesthetist. Frequently in hospitals no preparation of the patient is made; he is wheeled into the operating-room before narcosis has been completed, while he is still conscious of things about him, all of which is entirely wrong. The anesthetist should not talk to the patient while the anesthetic is being administered; perfect quietude should obtain in order that the patient may feel as if he is going to sleep; it is not necessary to tell the patient to breathe deeply.

I have never seen the necessity of seizing the patient's tongue with forceps. Three years ago I witnessed a series of operations by Richelot in the hospital of Paris, and I have never seen a more barbarous method of administering the anesthetic than they practice there. As soon as consciousness was abolished they passed a double tenaculum forceps on the tongue locked, and held it there one and a quarter hours during the operation. The patient suffers severely from this, and it is entirely unnecessary.

As Dr. Frazier has stated, it is not proper to continue to touch the conjunctivæ during the operation. I think Dr. Ray will tell us that it may be productive of much harm. All danger of burning the patient with the anesthetic should be eliminated. The anesthetist does not know it, but the surgeon often knows it afterward, that the patient is frequently burned about the face with chloroform, and considerable suffering is thus entailed; it gives the patient a bad impression about the whole procedure. Women with delicate skin are often burned about the neck and face from falling off the chloroform, which makes them exceedingly uncomfortable after the operation.

In regard to resuscitation of a patient apparently dead from the anesthetic, I have never had the unfortunate experience to lose a patient from the anesthetic, and I think this is an evidence of the safety of anesthetics. I have operated a great many times in the country, where the doctor who gave chloroform for abdominal section had not performed this function three times in five years. I have operated in all kinds of conditions and surroundings, and have never lost a patient from the anesthetic. When we take into consideration how many people are giving anesthetics every day, how little preparation is

observed, and how few deaths occur, it demonstrates that it is an exceedingly safe process; but when danger does occur, when the patient's condition is critical, when the patient is blanched, respiration fails, and the heart's action can not be detected in the radial artery, it is very important to act with decision and promptness. All of us have seen patients resuscitated in this manner, and we know how, in the majority of cases, it is quickly done. Under these circumstances, I do not believe we should waste our energies or time in giving drugs. If we have not the things at hand to stimulate the heart's action, to stimulate the capillary circulation, we should not omit artificial respiration one moment to get these things. I would try artificial respiration, elimination of the chloroform through the pulmonary mucous membrane, which is a great element in resuscitation and superior to every thing else. In many instances it may be necessary for the surgeon himself to do this.

Dr. J. G. Cecil: The thoughts that I had in mind were in the same line as those already expressed. I am like Dr. Vance in one particular, I am not a practical anesthetist; I have given chloroform seldom, although in general practice I have been called upon to do so many times, but I generally shirk it when I can. I can not say that I ever give either chloroform or ether with a sense of security and comfort to myself. I do not know whether I exaggerate the dangers or not; I have never lost a patient from chloroform or ether, and I have never seen any one die from either. I have seen patients come so near it, however, that we had all the sensations of having the patient die from the anesthetic.

I am so impressed with the importance of the man who administers the anesthetic being an expert, that I believe as far as possible we ought to relegate this entirely to a specialist. The method of giving chloroform or ether is also important; it ought to be thoroughly understood by the man who professes to be a specialist in this direction; he ought to be educated; students ought to be taught how to give these drugs. A man who professes to be a specialist in anesthetics ought to go a little further than this, he ought perhaps to be in full consultation with the surgeon as to the character of the patient he is to deal with, especially the weak points of that patient, and be able to decide, if the surgeon has not already decided for him, which of these two anesthetics would be the safer. There can be no doubt that a man who is accustomed to giving chloroform is a better man to give this drug than

he is to give ether, simply because he is more familiar with it; in other words, he is an expert. There can be no doubt, also, that ether is quite as safe or safer than chloroform. The percentage of deaths from these two agents runs about four to one. We can not get around these statistics. While I prefer to give chloroform myself, I really think that ether in the vast majority of cases is safer; yet I think the selection of the anesthetic ought to be determined by the character of patient we are to deal with. When a man professes to be a specialist in this particular he ought to be able to look the patient over; ought to have time and opportunity to do so; to study his case with especial reference to determining the anesthetic to be used, and it ought to be decided on these grounds and these alone. And a man who professes to be a specialist in this department ought to be prepared to give whichever he may believe to be the safest.

I heartily agree with Dr. McMurtry in one point he makes, in regard to fright being one of the most important factors we have to deal with in the administration of any anesthetic. The worst scares I have had, the patients who have come nearest dying, have been those who were frightened before the administration was begun; and I think so much of this that if I should find a patient very much frightened when the administration was begun, I should feel disposed to postpone the operation until fright subsided. This is an element which we ought not to ignore, because it is something we can not counteract after the damage is done.

With reference to the administration of chloroform in heart disease: We all fear heart disease in giving chloroform. I believe the worst form of heart disease in connection with the administration of chloroform is not the valvular lesions, but a fatty heart; heart changes on account of sclerotic degeneration, and calcareous conditions, make a more dangerous complication than the simple valvular troubles that we are prone to look for and to hesitate about administering chloroform in their presence. I would rather give chloroform to a person with any of the ordinary valvular lesions than one who had a weak, dilated or dilatable heart, or one who had a hard, calcareous condition about the heart. These are conditions which are often overlooked; when we are searching for heart conditions in reference to chloroform we are looking for murmurs, and if we would pay more attention to the condition of the arteries and what can be discovered with reference to dilatation or a dilatable heart, we would be looking to a better purpose.

Dr. Turner Anderson: It is impossible to state that any anesthetic is wholly devoid of danger. There is an element of danger in any anesthetic. Dr. Cecil has dwelt upon the question of statistics, and it seems to me that these statistics have been carefully collected, and they are altogether in favor of the safety of ether. If we will take the statistics of deaths from chloroform, and we are frequently shocked by a death occurring in our immediate community, and compare them with deaths from ether, other things being equal, we will find that four or five to one as regards safety would be clinically borne out. With these things before us, and with the facts staring us in the face constantly, that we can not always get a professional anesthetist, it seems to me that in the hands of the inexperienced ether is much the safer of the two. In my own surgical work, if I have a man giving the anesthetic who is inexperienced, if he is giving ether I always feel safe; if he is handling chloroform, and has not had experience, not so safe. So in those who have not had experience, I take it ether is decidedly the safer. Then, considering the fact that statistics bear out the statement that deaths are certainly more frequent from chloroform than from ether in the hands of those of experience, we make out a very plain case in favor of ether as a universal anesthetic. If there are no contra-indications, if there are no renal complications, ether must be regarded as the safer of the two; and it does seem to me we ought to follow the course of men in the East, in Pennsylvania especially, and use ether as the anesthetic. There are warnings which we can not disregard when ether is the anesthetic, and these warnings do not present themselves when chloroform is given. If it is true, as has been said, that ether kills by paralyzing respiration, and chloroform kills by paralyzing the heart, we are certainly in better position to combat the alarming symptoms which may arise with one than we are with the other.

In military surgery, in obstetrical practice, and in children, I suppose chloroform will continue to be the accepted agent, but in civil surgical practice it is quite a different thing. In military practice the patient is brought up to a condition in which he is prepared for any thing; his nervous system is in such a condition that he is willing for the operation; if he has met with an accident in battle he is in a condition in which he will take the anesthetic without fear of the consequences; his nervous system is in a satisfactory condition to accept it. I doubt if there ever was a single case of death during the Civil War

from chloroform anesthesia immediately following battles where it was given for the purpose of amputating limbs, etc. That fact has had much to do with our idea of the safety of chloroform, but the reasoning was not logical; the conditions are different in civil surgical practice.

In midwifery practice we have the same things which render chloroform safe. We have a woman suffering agony undergoing the pains of childbirth; she has gotten to the point where she is willing to take any thing or do any thing which will offer some comfort. She takes chloroform with impunity.

In childhood we have a similar condition; the child has no fear; it lives in the present; it has no evil forebodings; the child therefore takes chloroform better.

The conditions are entirely different when a woman comes to us for a laparotomy; she may be frightened; finally she places her trust in her doctor; she is more afraid of the chloroform than the surgeon.

Under these conditions, in civil surgical practice, with the present light we have, I think we are safer with ether than we are with chloroform, and ether should be the rule.

I very early in my professional life learned to administer ether. It was in this city when Dr. Battey performed his third so-called normal ovariectomy upon a lady of this city, and Dr. Murdock, of Pittsburgh, gave the anesthetic. Chloroform had been selected. Dr. Murdock said he was in the habit of giving ether, and as he was to be the anesthetist, he would prefer to administer ether in this case. He gave the patient ether. That was in 1875. Dr. Battey performed the operation, Drs. Sims, Ed Richardson, and myself were present, and Dr. Murdock gave the anesthetic. I was impressed with the ease with which the patient took ether, and commenced its administration from that time whenever I was called upon to give an anesthetic, or whenever it was used in my civil surgical practice.

If Dr. Frazier had been handling ether all these years he has been administering anesthetics, I believe he would be just as enthusiastic about it as he now is about the administration of chloroform. Neither is entirely devoid of danger, but we are safer with ether than with chloroform.

Dr. C. Skinner: If ether is so much safer than chloroform, I do not see why it is not used more in this part of the country. Dr. McMurtry brought up one point which I think is of great interest, and which carries me back several years, viz: the teaching of this branch of medicine

in the colleges. In 1881, while both Dr. McMurtry and myself were in the country, at a time when I had been studying medicine perhaps three months, he did two surgical operations, one for piles, the other for fracture. I gave the anesthetic in both cases. This was the first time I had ever given an anesthetic, and had never before seen it given. Both operations were successful. I have been associated with several medical schools, and do not remember to have ever heard a lecture delivered on the subject of anesthesia, the administration of chloroform or ether, or instructions in the use of local anesthesia.

I want to relate one accident I saw in my own practice several years ago where chloroform was used, but ether was taken along to be used in case chloroform acted badly. The patient was a young girl (aged nineteen years) who had an enlarged gland in her neck; this had been removed, and she had at the site of this enlargement a large scar which was a constant source of annoyance. I told her to have this scar removed, and she consented only when I put it on the ground of the cosmetic effect. Dr. Guest was to give the chloroform. Preparations were made for the operation, and chloroform was given, and we came near having a death. I had hardly commenced work when she quit breathing, and we had to stop the operation and resuscitate her by means of artificial respiration, heart stimulants, etc. She rallied, and we then proceeded with the operation, which was followed by a perfect result.

In regard to the condition of the patient that takes chloroform: Nativity plays a great part in this, but a great deal depends upon the mental condition of the patient as to the results and effects of chloroform anesthesia. My observation has been that women take it better than anybody outside of children, for the reason that with men there is more at stake. Men are harder to treat in every way; a sick man is harder to manage than a sick woman.

I have never had much experience in giving ether, having always selected chloroform. In obstetrical cases chloroform is the only anesthetic to be used. In spite of the precautions we take in preparing patients for surgical work before the administration of the anesthetic, accidents frequently occur; while in obstetrical cases where chloroform is given and forceps used, where the bowel is frequently loaded, bladder filled, the patient takes the anesthetic splendidly.

Dr. J. M. Ray: One point I would like to emphasize, viz: The question of lessened danger from chloroform in children. We throat

men are frequently called upon to give anesthesia to remove tonsils, hypertrophied adenoids, etc., and formerly I was in the habit of using chloroform altogether. Hinkle, of Buffalo, N. Y., read a paper before the American Laryngological Society giving late statistics. He states that children with enlarged glands were particularly prone to suffer from chloroform anesthesia, and that the so-called lymphatic diathesis contra-indicated the administration of chloroform. He concluded his paper by stating that chloroform was not justifiable in operations for adenoids or enlarged tonsils in children, and it seemed to be well understood that ether was much safer in these operations. As a result of that paper and quite a spirited discussion which followed it, I have about abandoned the use of chloroform for adenoids, and have confined myself to nitrous oxide gas; when a longer anesthesia is required, I use ether. In the last three or four years I have used ether for operations on adenoids and enlarged tonsils.

Dr. T. L. Butler: My personal experience in giving anesthetics has not been unfortunate, but I have seen, it seems, more accidents than the majority of the gentlemen who have spoken to-night. When I first graduated, and even before that, I gave anesthetics a great deal; at first for the late Dr. Yandell, in his clinic, later as his assistant, and with Dr. Roberts. I kept a record for two years, and in that time probably gave anesthetics two hundred times. After that I ceased keeping a record, and ceased giving anesthetics as much as I had previously done. During this time I never saw an accident. The anesthetic invariably used was chloroform. Since that time, in assisting various surgeons in the city, I have seen three deaths on the table. These three were all when chloroform was being administered, and in all three of them they were using the Esmarch inhaler. In two of these cases the patient unquestionably died from failure of respiration; the heart-beats continued for a short time, but respiration could not be re-established. In the third case the patient died suddenly, I think from heart failure, coming under the fourth classification that Dr. Frazier gives.

In my own experience I have had one death on the table from chloroform, although I have never felt quite satisfied whether it was the chloroform or the condition of the patient. This was in the person of a negro at the City Hospital. I had not seen the patient; he was being given the anesthetic in the ante-room, and the interne came in and told me that he was dead. Post-mortem showed that he had a fracture at the base of the skull, and besides that a depression. I do not know

what his condition was when the anesthetic was started. The three cases mentioned occurring outside of my own practice unquestionably died from the anesthetic, as the surgeon's work had not been started.

These experiences have led me to believe very much as Dr. Anderson. I am inclined to believe, both from statistics and my own limited experience and observation, that ether is the safer anesthetic of the two.

Dr. B. C. Frazier: As a student I gave chloroform once for Dr. Vance to operate upon a strangulated hernia. After graduation I went to Chicago and had an internship in the United States Marine Hospital, and only gave ether the whole time I was there. I gave all the anesthetics in the hospital, and in a good many private cases for the late Dr. John B. Hamilton. In only one case did I administer chloroform, and that was for a broken arm. In all other cases ether was given. All of them, I think, took ether badly. There was more excitement than there should be, the patients became blue, respiratory efforts were labored, and all the patients looked badly. When I returned to Louisville I gave chloroform for Dr. Cartledge a great deal, and gave ether occasionally.

I do not mean to say that statistics are not very much against chloroform; I know this. The anesthetic should be very carefully started; that is the first principle to be observed. Drinkers take any anesthetic badly. I am sure they take chloroform more kindly than ether, because it does not produce so much excitement. In certain persons we have an idiosyncrasy to chloroform or ether as well as other drugs. They may die from this just as people die sometimes from very small doses of morphine or other poisonous drugs. There are many minor points in regard to anesthetics that should be observed, and could be made an interesting topic for a paper, that I did not try to bring out.

Dr. Yandell used to deliver one or two lectures a year on anesthetics. His preference was chloroform. He had three rules: First, watch the respiration; second, watch the respiration; third, watch the respiration! I am inclined to think more and more that the respiration is the especial point to be watched, although I always keep my hand on the pulse. It is important to watch the circulation and the respiration.

I can not agree with some of the other speakers, that men take anesthetics worse than women and children. I have given chloroform to an infant six weeks old; I have given it to the aged, old men and women eighty-eight years. I believe chloroform is better than ether,

because it does not produce such a cyanotic effect. Children usually take it very well, but I am always anxious when giving it to small children. If chloroform is really a depressant it should be contra-indicated in children, although they appear to do well. Chloroform is certainly the safer anesthetic for operations done at night where there are lights, especially gas; the dangers which surround ether under these circumstances are well known.

I have given chloroform many times for operations upon adenoids and enlarged tonsils. They are quick operations, and the patient can be brought to complete anesthesia, and then the anesthetic can be stopped. Chloroform does not congest the face, the blood-vessels are not so tense, and for that reason alone it would be safer than ether.

Women, as a rule, have a shorter stage of excitement under anesthesia than men, probably because they give themselves up more fully. Ether frequently excites a flow of mucous, setting up a cough and bronchorrhea in old people, which chloroform does not.

In looking over a recent issue of one of the medical journals I found the appended clipping, which may be of interest:

A MIXTURE OF CHLOROFORM AND ETHER IN ANESTHESIA.—Edward Adams, in the Medical News, gives the results, based on an analysis, of three hundred narcoses induced by the inhalation of ether fifty-seven parts and chloroform forty-three parts, in what is known as the "M. S." mixture. He claims, among the advantages of this mixture, that the stage of excitement and struggling is not marked, and that very little time is required to bring the patient under the influence of the anesthetic. The dose is comparatively small, about forty cubic centimeters being all that is required to maintain anesthesia for an hour. Such a mixture, he maintains, is safe, pleasant to take, and the after-effects are not marked, patients recovering quickly from the anesthesia. He says it can be used in nearly every condition in which chloroform or ether is employed.

Personally, I can see no good reason for mixing ether and chloroform. If we are going to administer an anesthetic, we might as well use either chloroform or ether; certainly I can see no object in giving a mixture of these two agents.

B. C. FRAZIER, M. D., *Secretary.*

Reviews and Bibliography.

Clinical Pathology of the Blood. By JAMES EWING, A. M., M. D., Professor of Pathology in Cornell University Medical College. Octavo, 432 pp. Lea Brothers & Co., Philadelphia and New York. 1901.

This book, appearing at a time when so much interest is being taken in the study of the blood in its relation to surgery and medicine, is indeed a welcome volume. It is beautifully illustrated with many colored plates, and the editor and publishers are to be congratulated upon their production. It is complete in every detail and thoroughly up-to-date in every particular. We heartily recommend this book to all interested in the modern pathology of the blood.

Infant Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M. D., Fellow of the New York Academy of Medicine, etc. F. A. Davis Company, Philadelphia and Chicago. 1901.

Compact as this little volume is, it is essentially a most practical treatise on the subject. Very properly is this so, because a baby is the most practical thing in life, and least of all problems one to be discussed on the lines of mere theory. The volume under review presents the ripe thought of a student under the best masters, and in himself an authority whose experience with infant humanity has been of the widest. Dr. Fischer was intimately associated with Baginsky in Berlin, and for ten years has been an instructor in pediatrics at the most important schools of graduate study in New York, and for the same time has been in charge of the children's ward in several of the most prominent hospitals. The conclusions which he presents are, therefore, the detailing of actual practice, which has stood the test of ripe experience and well-grounded study. The scope of Dr. Fischer's work is satisfactorily indicated by its title. He begins with the first need of the newborn infant for food, and the food which it normally receives at that time, namely, the thin and watery colostrum, and he shows the part this early mammary fluid plays in the infant economy. From this he advances to the consideration of true breast milk, and thenceforward develops the nutritive needs of the infant up to the period of dentition. The next step is to the time of weaning, and then the food with which the infant may be expected to enter upon the period of childhood. This arrangement of topics is most natural, and can not be other than satisfactory in such a practical hand-book for the practitioner. Before entering upon this line of study, however, the author prefaces his work with a very valuable presentation of the normal and abnormal conditions of the infant stomach, the various natural ferments, and the constituents of normal breast milk and of the various substitutes. Where all is so good it is a difficult task to pick out that which is best; yet despite this difficulty there can be little doubt that all practitioners will welcome the stress which the

author lays upon the importance of breast-feeding for the infant up to the natural period of weaning, and certainly to the period of incipient dentition. In no uncertain tone the author makes it plain that breast-feeding is not only best for the infant, but for the mother as well. When conditions exist under which it is impracticable for the child to be suckled by its own mother, he advises first and foremost the employment of a wet-nurse. It is only after these possibilities have been exhausted that he permits the consideration of bottle-feeding. In connection therewith he discusses the various forms of artificial substitutes for breast milk, and thus comes to the consideration of infant foods other than milk. It is a marked manifestation of the scrupulous care of the author that it would be difficult to name any milk substitute or infant food at all worthy of consideration which he has not discussed in the volume under review, pointed out its excellencies, and indicated the untoward symptoms which may be expected to follow its employment. In conclusion, as at the outset, too much stress can not be laid upon the fact that this is not a theoretical contribution to a subject which is essentially practical. It is intended to be used by practitioners who are in doubt as to any particular to supply the resolution of their doubt, to offer a consistent system of infant feeding. It is certain that before the publication of this volume there has been nothing of the sort in any language.

INFLUENCE OF THE LOSS OF THE THYROID GLAND UPON THE HEALING OF FRACTURES (*Archiv für klinische Chirurgie*, Band 60, Heft 2).—The thyroid gland, it would appear, has a very distinct bearing upon the union of fractures, and it was in order to elucidate this influence that Maurice Steinlin undertook an interesting research. He gives his results in a paper on the subject. Removal of the gland in animals who were then made the objects of simple fractures resulted in a marked effect upon the formation of callus. For the first two weeks there was not any marked difference to be discovered by microscopic examination, but by three weeks, when a fracture in a normal animal would be completely ossified, the callus in the animal devoid of its thyroid was still in the state of pure cartilage. Even after so long a period as eleven weeks there was yet some cartilage remaining in the region of the fracture, though eventually complete ossification did result. The formation of the new medullary canal began about the eleventh week, but was not finished until more than twenty-four weeks after the breaking of the bone. The actual amount of callus formed after the removal of the thyroid is smaller in amount than it is normally, and it remains longer than is usual before it is reabsorbed. The greater the interval which has elapsed from the time at which the thyroid was excised, the more marked is the effect of such ablation upon the healing of a fracture.
—*Treatment.*

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H. A. COTTELL, M. D., M. F. COOMES, A. M., M. D., Editors.

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AMERICAN MEDICAL ASSOCIATION.

At the recent meeting of the American Medical Association revised constitution and by-laws were passed, making this one of the most popular associations in the world. President Reade deserves great credit for managing to have this revised constitution become a law at once, instead of laying over for one year, as was formerly the rule. When the reorganized American Association gets into full working order it will excel all the bodies of medical men in the world as to numbers, and will doubtless be one of the most thoroughly active bodies of its kind. It is generally believed that this method of organization will induce countless numbers of practitioners who are now non-society men to join the organization. It is difficult to understand how an active practitioner can afford not to belong to this organization, for it carries with it a prestige that can not be obtained by any other means.

The adoption of the new constitution of the American Association makes it necessary for the State Society to revise its constitution. The work is in the hands of an excellent committee, and will no doubt be judiciously carried out.

The following selection of officers for the ensuing year was made: For president for the ensuing year, Dr. John A. Wyeth, New York; first vice-president, Alonzo Garcelon, Maine; second vice-president, A. J. Stone, Minnesota; third vice-president, A. F. Jonas, Nebraska;

JAMES H. LETCHER,

Henderson, Kentucky.

fourth vice-president, John R. Dibrell, Arkansas; treasurer, Henry P. Newman, Illinois; secretary, Geo. H. Simmons, Illinois. On motion, the ballot of the committee was cast for Geo. W. Webster, Illinois, for librarian. Board of trustees, term expiring 1904: W. W. Grant, Colorado; John F. Fulton, Minnesota; T. J. Happell, Tennessee. Judicial Council: Geo. Cook, New Hampshire; H. H. Grant, Kentucky; John B. Murphy, Illinois; Philip Marvel, New Jersey; Louis H. Taylor, Pennsylvania; John L. Dawson, South Carolina; N. Fred Essig, Washington. Oration in Surgery, Harry Sherman, California; Oration in Medicine, Frank Billings, Illinois; Oration in State Medicine, J. M. Emmert, Iowa. Place of meeting, 1902, Saratoga Springs, N. Y. Chairman of Committee of Arrangements, G. F. Comstock.

KENTUCKY SCHOOL OF MEDICINE COMMENCEMENT.

The commencement of the Kentucky School of Medicine was held at Macauley's Theater on June 26th. The regular degree was conferred upon forty-three students, and the post-graduate degree upon fifteen. This was the fifty-first anniversary of the origin of the school, and was the conclusion of one of the most successful years in its history. While the school has always been well equipped for scientific work, both theoretically and practically, many facilities have been recently added, and it is to-day one of the most thoroughly equipped schools in this country, laboratory and clinical work being features especially emphasized.

The school requires attendance upon four regular courses of lectures in each of four separate years, and has practically adopted in each year university methods, students being examined regularly, and receiving no credits unless they obtain the required average. The old practice of giving students time cards without an examination has wisely been discontinued, for under no condition is a school justified in advancing a student to a higher grade except upon a written and oral examination that will test his qualifications, or in admitting a student from another school who has no credits for examinations, showing his right to claim advanced standing.

The methods will be greatly improved for the next session, which will begin January 2, 1902, and many improvements will be made and facilities for teaching and demonstrations added.

DR. JOHN A. WYETH.

Dr. John A. Wyeth, the newly-elected President of the American Medical Association, was born May 26, 1845, in Marshall County, Ala. He is descended from an old Pennsylvania family, his grandfather, General Wyeth, being one of the early publishers of Alabama. His education was received at La Grange Military Academy. He served as a private soldier in an Alabama regiment during the Civil War. He is a graduate of the University of Louisville, and after a brief period of practice in Alabama moved to New York City. His career from that time to this has been a noted one. He has distinguished himself as one of the best practical surgeons in the world. This qualification is thoroughly demonstrated at the operating-table and in his excellent work on Surgery. The Society could have made no better selection for its chief officer than it did, and we predict a successful year under his management.

Current Surgical and Medical Selections.

THE TREATMENT OF TUMORS COMPLICATING PREGNANCY.—In the Medical News, 1900, p. 1028, Wells contributes a paper upon this subject. He estimates that two thirds of the cases of pregnancy complicated by the early stages of cancer go on toward term. In spite of this fact, in view of the feeble vitality of children so born, and of the dangers to the mother which birth brings about, the presence of cancer at any stage of pregnancy demands a radical operation. When the body of the uterus has attained some size, he advocates Werder's method. By this the ovarian and uterine arteries are tied through an abdominal incision, the uterus freed from the bladder and broad ligament, without cutting through the abdominal wall. The vagina is then freed from its adhesions by blunt dissection, and the uterus drawn down and out through the vulva. The peritoneum is then united over the fundus, the abdominal wound is closed, and the operation completed by removing the uterus after dividing the inverted vagina at the point selected. If the uterus is too large, a supravaginal amputation should first be made to lessen its bulk before the removal below of the cervix and vagina.

As regards fibroids complicating pregnancy, the gravest cases are those in which the fibroid occupies the pelvic cavity. Abnormal attachments of the placenta, post-partum and puerperal hemorrhages, and other complications may arise. Myomectomy is justifiable with small subperitoneal

tumors of the fundus or any sort of fibroids so situated that they can be removed. With interstitial tumors, supravaginal hysterectomy is the operation of choice. During labor attention should be given to securing contraction of the uterus during the third stage. If post-partum hemorrhage occurs the womb should be explored by the hand, as sometimes fibroids are found that can be easily enucleated, and the womb should then be packed with gauze. Ergot should also be used. Where the tumor is at the fundus, inversion of the uterus may result, which necessitates immediate enucleation and replacement or hysterectomy. When the tumor is in the anterior wall of the womb it may sometimes be pushed out of the way with the patient in the knee-chest position. This can not happen if the tumor is lateral or posterior. Fibroid polyps should be removed after labor to prevent sloughing.

In ovarian tumors complicating pregnancy the tumor should be removed if detected early in pregnancy. After the fifth month, if the cyst is impacted and not large, the interests of the fetus may be consulted, and operation may be postponed until it is viable. Should, however, impaction or obstruction to labor occur by an ovarian cyst, abdominal section is the better procedure.—*Amer. Jour. Med. Sciences.*

MYOMECTOMY PER VAGINAM.—J. R. Goffe, of New York (*Jour. Am. Med. Ass'n*, Aug. 4, 1900), is a strong advocate of conservatism in gynecologic surgery, and in applying this principle to the uterus, follows this rule: Remove the diseased portions—as many fibroid foci as can be discovered—but save the uterus. The field for discussion here is very broad, involving the question as to whether fibroid disease of the uterus is purely a local disease and confined to the uterus, or whether, as is maintained by some, it is a general disease and invariably attended by fibroid or cystic degeneration of the ovary and fallopian tube; whether the symptoms ascribed to this disease are caused solely by the uterine neoplasms, or whether many, if not most of them, are due to accompanying or complicating diseases; whether all foci of the disease can be with reasonable certainty eradicated, or whether some must necessarily be overlooked and so continue the symptoms, and later necessitate a second operation.

For this purpose in performing myomectomy he uses the vaginal route almost exclusively, claiming that the superiority of the vaginal method over the abdominal in meeting this condition is the same as that which attaches to all vaginal work; the dangers are less, the convalescence is smoother and simpler, the patient being relieved of the annoyance of stitches, adhesive plaster, bandages, and dressings; there is no visible scar to constantly remind her of her experiences, and above all there is no danger of hernia. The question arises: What shall be the upper limit to the size of the fibroids that can be dealt with in this way? Experience and facility of operation on the part of the operator can alone determinē this question, although the location of the tumor plays a large part in its solution. The traumatism,

so far as the patient is concerned, is of so slight a character that even if the effort in this direction must be abandoned and the abdominal incision made, very little detriment attaches to it, except the loss of time.

After the incisions are made, opportunity is afforded to decide whether a myomectomy or a hysterectomy is indicated; if the latter, all the steps already taken are essential to the procedure and no time is lost.—*St. Louis Courier of Medicine.*

ALCOHOL IN PNEUMONIA.—In discussing the diet in the acute stage of pneumonia, A. H. Smith (*International Med. Mag.*, Oct., 1900) says that it is now accepted that alcohol is a food as well as a stimulant, and as such it may be employed to replace in part, or to supplement, other diet in the acute stage of pneumonia. He thinks that it can be used with advantage much earlier in the disease than it is usually administered. Its distinctly antigermic property aids in inhibiting the local bacterial activity, as is shown by much clinical evidence. Many cases have been reported which have been saved when *in extremis* by the use of twenty to thirty ounces of brandy or whisky in twenty-four hours. The writer says that alcohol may be used tentatively at any stage of pneumonia, and that its action will be shown to be beneficial if the pulse becomes less frequent and of greater volume, and the respiration slower and deeper, twenty minutes after the dose is taken. The amount and frequency of the dose should be regulated by the duration of the improvement in the pulse and respiration. In drunkards alcoholic stimulation begins only when the amount given exceeds the habitual allowance in health. The excessive mortality of pneumonia in heavy drinkers is probably due to the fact that the depression caused by the disease has added to it the prostration caused by a withdrawal of the amount of alcohol which has become a necessity to their existence. Therefore, an alcoholic with pneumonia should get his full daily allowance of spirits, after which the amount of stimulation may be considered. A pneumonia patient should be allowed to drink all the water he desires. The diet, of such a nature that it will not readily ferment, should be restricted to an amount that can be easily digested and assimilated. Flatulence should be prevented by modifications in the quantity and quality of the food. If other forms of food are not properly digested and assimilated, the substitution of a greater proportion of alcohol is indicated.—*Medical News.*

Special Notice.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See advertising page, this issue.) See remarks on their Arom. Fluid Pepsin also.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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No. 2.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE PRACTICAL MANAGEMENT OF SMALLPOX.*

BY M. K. ALLEN, M. D.

Directly after the return of the soldiers from the Cuban war to the United States there commenced one of the most widespread epidemics of smallpox this country has ever experienced. This epidemic has entailed a cost to the people of this country of millions of dollars in the way of vaccination, isolation, and the caring for those afflicted with the disease, and millions of dollars in the loss sustained to business, not to speak of the loss in life.

The disease has prevailed in a mild form, and the death-rate has been low. Many counties in this State have had to contend with the disease, and, aside from loss of life, the direct pecuniary loss has been over a quarter of a million dollars, to say nothing of the business loss and embarrassment.

It has therefore occurred to me that it might not be uninteresting to at least some members of this Society to give a short, concise statement of the methods which have been employed by the health department of this city during the past two or three years in the management of smallpox.

At the suggestion of the health officer, an ordinance was adopted and became effective February 6, 1899, Section 11 of which reads:

"It shall be the duty of all inhabitants of the city of Louisville, who have not been vaccinated, or, if vaccinated, not successfully, to procure their own vaccination, or revaccination, as the case may be,

* Read before the Kentucky State Medical Society, Louisville, May, 1901.

within ten days from the passage of this ordinance; and all persons who shall fail or refuse to comply with this section of the ordinance within the time prescribed herein, or shall fail or refuse, on demand of the health officer, to submit to vaccination by him or by the physician of the eastern or western districts, or some other reputable physician of the city of Louisville, shall be fined in any sum, not less than five dollars nor more than fifty dollars for each offense."

Section 12 of the same ordinance reads: "No principal of any school and no principal or teacher of any private, sectarian, parochial, or other school shall admit to any school any child or minor who shall not have been properly vaccinated. The evidence of such vaccination shall be a certificate signed by the health officer or any practicing physician."

Section 13, same ordinance, reads: "The health officer is hereby empowered to visit any and all public, private, and parochial schools in the city, and to make or cause to be made an examination of the children and minors in attendance therein as often as may be deemed necessary to secure compliance with the provisions of this ordinance."

It will thus be seen that the health officer of this city is clothed with full authority to compel vaccination, and this discretionary power is exercised without fear or favor. I am glad to be able to say that meanwhile the more intelligent part of our community voluntarily seek vaccination. The enforcement of the ordinance in reference to the public schools is done in a very thorough and systematic manner.

It is the custom of the health officer to confer with the superintendent of the public schools in the months of October and February of each school year, which results in the principals requiring teachers to report to the superintendent the number of unvaccinated children applying for admission to the various schools in the city.

When the superintendent has acquired this information, he in turn notifies the health officer of the exact number of children to be vaccinated. A program is then arranged by the superintendent of schools and the health officer whereby the principal of each school is notified of the day and hour when a physician from the health department will be present for the purpose of vaccination. The pupils to be vaccinated are in turn notified to present themselves with perfectly clean arms at the time appointed to receive the operation of vaccination.

By a strict adherence to the program as outlined, the entire unvaccinated public school population are reached within a week or ten

days, twice in each year, and oftener if thought advisable. Being governed by the reasonable desire for the protection which vaccination affords, many of our more intelligent people who employ help, acting upon the advice of the health officer, require evidence of successful vaccination as one of the conditions of employment. We use both points and hermetically-sealed glycerinated glass tubes, rather preferring the tubes, as our experience leads us to believe that there is less inflammatory action ensuing.

In our hands most marvelous results have been obtained, at least ninety per cent of primary vaccinations proving successful, if the operation is done after the following fashion:

Site. The insertion of the deltoid in the left arm is to be preferred in children who are old enough to walk, and in adults. The outer side of the thigh below the junction of the lower and middle thirds may be chosen in women and infants, sometimes also the junction of the middle and upper third of the leg on the outer side.

Asepsis. The hands of the operator had best be thoroughly scrubbed with soap and water before undertaking this little operation. The point of vaccination should be thoroughly washed with a brush and soap, then with plain water, and lastly with alcohol on a piece of sterile gauze or cotton, allowing the alcohol to evaporate.

Scarification. Scrape at least two surfaces not over three-eighths inch each in diameter, sufficiently to bring a little blood or serum. An ordinary cambric needle is the best scarifier, and this should be passed through a flame before using.

Virus. Use preferably glycerinized virus; rub it thoroughly into the scarified area with a small piece of wood which has been previously boiled. Allow the part to dry in the air; no dressing is necessary.

I have dwelt upon this feature of this paper, because vaccination is not only an absolute preventative against the inception of smallpox, but, should the disease by any means get a foothold, vaccination and revaccination will rapidly and surely eradicate it.

The truth about the matter is, that the time has come when failure on the part of any community to gratuitously, regularly, and systematically practice vaccination as a prophylactic measure is as criminal as it would be on the part of a practicing physician to neglect the use of antitoxine in diphtheria, mercury and iodine in the treatment of syphilis, quinine in the treatment of malaria, salicylates in the treatment of rheumatism, or atropin in the treatment of opium poisoning.

So much for vaccination. We will now hurriedly refer to our practice in reference to isolation. The health officer recommended the following, which became a law in this city February 6, 1899: "That any person who shall have the smallpox and refuse, on the demand of the health officer, to be sent or to be taken to the Eruptive Hospital, or to remain at said hospital, after being sent or taken thereto, during his or her illness from said disease or before being discharged therefrom by its superintendent, shall be fined not less than twenty-five dollars, nor more than one hundred dollars, for each offense."

It will be observed that the health officer has absolute authority to compel isolation by having all persons conveyed to the Eruptive Hospital, which is situated at least five miles from the city on a large tract of land which belongs to the city. Since I have had the honor to be health officer of this city, we have had six hundred and sixty-one cases of smallpox, and that you may know how I have exercised my authority in this direction, I report the fact that out of this number all were sent to the Eruptive Hospital, and thus put in complete isolation, with the exception of nine persons, and they were in such physical condition that their lives would have been endangered by removal, and I will say that three did die within forty-eight hours.

When a suspected case of smallpox is reported to the health department by a physician or otherwise, one of the physicians connected with the office, who is experienced in the diagnosis of this disease, visits the suspected case, and if found to be suffering from smallpox, the ambulance is immediately telephoned for, and the patient is removed to the Eruptive Hospital. The physician then vaccinates the immediate neighborhood. The next step is to send an inspector from the health office who knows his business, and all the old bedding and woollen fabrics in the infected house are saturated with coal oil and cremated, the city remunerating the owners of the property thus destroyed.

The infected house is then tightly closed and fumigated with formaldehyde gas. We use the H. K. Mulford regenerator and a forty-per-cent solution of formalin. Health departments all over the country after having tried all known means of disinfection have almost unanimously concluded that formaldehyde is the most destructive agent to germ life now known, and our own personal experience fully justifies this almost universal opinion. I am enabled to say that in almost every instance, when cremation and formaldehyde disinfection for a period of from four to six hours has been practiced, we have not had a recurrence of smallpox.

While formaldehyde gas is a destroyer of odors, it has scarcely any odor itself, and it does not attack metals, as does sulphur and other substances which are sometimes used for disinfection. In the use of this agent for the destruction of germ life it is necessary to first close the windows, doors, and other openings of the room or rooms to be disinfected as tightly as possible with folds of paper, wet batting, or old cloths. Bed clothes, carpets, and other fabrics should be lightly spread over chairs and bedsteads. The amount of formaldehyde to be used in any given space can be obtained by multiplying together the length, breadth, and height of the room or rooms, and then allow from eight to twelve ounces of forty-per-cent solution of formaldehyde to each one thousand cubic feet of room space to be disinfected.

It will be thus seen that it would require thirty fluidounces of formaldehyde to properly disinfect a room 15 x 20, with a ceiling 10 feet high. This amount of formaldehyde will be evaporated in about forty minutes. The space thus treated should be kept closed from six to twenty-four hours.

There has recently been placed upon the market a para-formaldehyde candle, put up in two sizes, which can be used as are the candles of sulphur dioxide. These candles consist of para-formaldehyde incorporated with a small proportion of paraffine and pressed in cylindrical form.

These candles are supplied in a tin container or burner, to which a limited amount of oxygen has access during operation, so as to support combustion only at the bottom of the candle, and by burning in this manner the heat produced causes the solid para-formaldehyde to revert to the gaseous formaldehyde.

The smaller of these candles contain three hundred and fifty grains each, and when ignited generate sufficient gas for the surface disinfection of a room not exceeding three hundred cubic feet capacity, and by increasing the number of candles, in the proportion of one candle to every additional three hundred cubic feet of air space, any sized room can be disinfected. The larger candles, containing seven hundred grains of paraform, are useful in disinfecting larger spaces, such as halls, churches, and school-houses.

Exhaustive tests have been made by the bureau of bacteriology of the health department of the city of Buffalo, N. Y., as to the destructive efficiency of these candles. These experiments have fully developed the fact that all pathogenic microbes and spores are energetically destroyed, without exception, by their proper use.

It should be remembered that formaldehyde gas disinfection can not be positively relied on so far as glazed surfaces, such as china, marble, metal, etc., is concerned, and that subsequent washing of these surfaces should be practiced with a solution possessing such recognized properties as a five-per-cent solution of formalin, carbolic acid, or some other disinfecting solution possessing solvent and penetrating germicidal powers.

I will say for the information of any one who may wish to try these candles for disinfecting purposes in any character of contagious diseases, he can be put in communication with the State agent by communicating with the health department of this city.

Now, to sum up the suggestions contained in this paper, which is already too lengthy, I will say that vaccination and revaccination promises absolute immunity against variola, one of the most disgusting diseases with which the human family have to contend. Secondly, that perfect isolation completely checks the spread of variola, and thirdly, that disinfection properly performed with formaldehyde gas does, beyond any reasonable doubt, destroy bacterial life. If these three methods as suggested will accomplish what is not only claimed in this paper, but confirmed by the experience of the whole world and admitted by all intelligence, both professional and otherwise, why should smallpox prevail in any community? And are not those in official authority morally responsible for not providing the proper means to prevent sickness and death from such a disgusting and loathsome disease as is smallpox?

LOUISVILLE.

TUBERCULOSIS OF THE TESTICLE AND EPIDIDYMIS.*

BY IRVIN ABELL, M. D.

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In reviewing the literature upon this subject one is impressed with the diversity of views upon several points connected therewith, expressed by men whose prominence commands respect for their opinions. That the process in the testicle is ever primary is denied by most writers, others regarding it of such rare occurrence as to pass

* Read before the Louisville Pathological Society.

it with a simple mention. That the process in the epididymis is often primary we find asserted by such men as Senn, Councilman, Reclus, Murphy, Saleron, and other investigators, while Virchow, Koenig, and Kocher have always held that the infection is a descending one.

Councilman states his belief that the most common seat of primary urogenital tuberculosis is the epididymis, as follows: "It may be confined to this or the testicle affected by continuity. The epididymis is converted into a more or less firm caseous mass. From this the disease extends along the vas deferens, which becomes enlarged, and, on section, the interior is found to be lined with a whitish caseous tissue. In both the vas deferens and the epididymis the seat of the disease is primarily in the epithelium, and later takes the form of a tubercular inflammation. Seminal vesicles on the same side become affected in most cases, or they may be passed by and the disease appear in the prostate or bladder."

Fuller says: "It is rare for the tubercular deposit in the epididymis to represent a primary focus of disease, as, in a vast majority of cases, the inflammation has extended to the part along the genital tract from the deep urethra or seminal vesicle. In many instances I have watched the process of extension, having detected the tubercular involvement of the deep urethra or seminal vesicle long before the disease had extended itself into the epididymis."

In which belief Guyon and Lancereaux concur.

Among the various influences operating to determine the localization of tubercle bacilli in the epididymis may be mentioned heredity; that is, the local predisposition may be inherited or the disease may be congenital, as in the cases of Giraldes and Dreschfeld (*British Medical Journal*, 1884), in which the testicle was tubercular at birth.

M. Julien reports sixteen cases in infants, six of which were in patients less than one year old. Injuries, particularly slight and insignificant ones, by lessening local resistance may afford a nidus for deposition of germs. Simmonds experimentally demonstrated this by injecting tubercular sputum into the peritoneal cavities of rabbits and afterward crushing or bruising the testicle, tuberculosis following the subsidence of the orchitis.

Severe injuries are rarely followed by tuberculosis, since, according to Volkmann, the active changes set up in a tissue during its repair following such an injury counteract the propagation of the bacilli.

Antecedent or co-existing disease of testicle, particularly gonorrheal

epididymitis. In fifty-two cases collected by Kocher and sixty by Simmonds, fourteen of Kocher's and eleven of Simmonds' had previously suffered from it.

Senn states that gonorrheal epididymitis at times imparts a malignant character to the tubercular process, and quotes the following case of Birch-Hirschfeld, a soldier with gonorrheal epididymitis, who died in eight days from a diffuse miliary tuberculosis having its apparent point of origin in the gonorrheal epididymis.

Jani has found bacilli in healthy testicles of phthisical patients, and Koenig thinks that in these cases a gonorrheal epididymitis would serve to prepare the ground or culture medium for an already existing infection.

Another cause advanced by Saltzmann for localization is that the branches of the spermatic artery to epididymis are tortuous, consequently slowing blood-current, favoring bacterial growth; in descending infections the epididymis would naturally be involved before the testicle.

The points of entrance of bacilli are conceded by all to be the respiratory, gastro-intestinal, and gastro-urinary tracts, and the skin, the localization in the epididymis then depending on one or more of the aforementioned conditions. The most potent source of tubercle bacilli in the blood is believed to be the mediastinal lymph glands, which have been shown to be tubercular in 75 per cent of cases coming to the post-mortem table.

Another method of infection, the possibility of which can readily be seen, and which is advocated by M. Verneuil, is by coitus. The instances, however, of primary tuberculosis of testicle or epididymis with infection occurring during coitus must be rare, although the disease occurs most frequently at a time when the generative system is at its highest state of physiological activity, and that is between the ages of twenty and thirty years, although no age is exempt.

The macroscopical and microscopical appearances to be found depend upon the stage of the disease in which the examination is made. The tubercular process itself does not differ here from tubercular processes elsewhere, but consists of deposit, caseation, and liquefaction, calcification being rarely observed.

Considerable diversity of opinion seems to exist in regard to the primary starting-point and to the local dissemination. The involvement of the testicle is nearly always secondary to that of the epididy-

mis; the epididymis is most frequently attacked first in the globus major, although the observations of some few have been that the globus minor is first affected. Jacobson suggests that those cases in which the head of epididymis is first attacked are the primary ones, as the spot of involvement usually corresponds to the entrance of the branch of the spermatic artery, while those in which the tail is attacked first are secondary to other urogenital lesions, the infection descending from the urethra or seminal vesicles through the vas deferens.

In thirty-four autopsies Reclus found the epididymis affected singly in only seven instances, twenty-seven times simultaneously with the testicle. In the testicle the tubercular process is found as caseous nodules or miliary infiltration; as miliary tuberculosis of the testicles only occurs with a systemic infection, it will not be considered in this paper.

The nodules are first noted in the head or tail of the epididymis, and after a greater or less length of time coalesce, so that the epididymis may be represented by a hard, irregularly outlined crescentic mass partially encircling the testicle. These nodules, on section, appear as pale-yellow opaque masses, in which only a small amount of normal tissue is recognizable. These nodules undergo caseation and softening, coincident with which the capsule of the epididymis becomes thickened, the surrounding areolar tissue infiltrated with serum and lymph, liquefaction of the caseous foci takes place, the skin becomes adherent to underlying structure, and the tubercular puruloid material is spontaneously evacuated, leaving fistulæ with hard, thick walls, which are later covered with unhealthy granulations—the infective granuloma. In the testicle the primary foci are large, varying in size from a hazelnut to a walnut; are much firmer than surrounding normal glandular tissue, and are surrounded by a vascular zone.

Caseation with abscess formation and perforation may follow. If the disease in the testicle is secondary to that of the epididymis, the nodules are smaller and more numerous, and present more the appearance of an infiltration; the smaller nodules are seen around the periphery, while the larger ones are seen along the mediastinum testis, indicating the extension from the epididymis, the distribution following that of the seminiferous tubules. As the disease progresses the nodules rarely become encapsulated or undergo calcareous degeneration; most often they coalesce, soften, and break externally, the gland being more or less totally destroyed. The tunica vaginalis usually

shows evidence of chronic trouble, is unnaturally vascular, its cavity wholly or partially obliterated, or may contain fluid which may be serous, sero-purulent, or pus, tubercle bacilli having been found in all three varieties.

Simon examined twelve tubercular testicles, and found evidence of involvement in eight. M. Tuffier found that the liquid of hydroceles present in three cases of tubercular testes injected into the cavities of animals produced fatal tuberculosis, although no bacilli could be demonstrated in the fluid. The vas deferens is very commonly involved, becoming hard, knotty, and thickened, rendering it more or less irregular, with nodules. The lesions are found particularly near the testicle and near the seminal vesicle.

The situation of the primary nodule has been and is the subject of dispute. Reclus and Malassez locate it in the wall of the seminal tubule; Virchow, Tizzoni, Gaule, and Steiner in the intercanalicular connective tissue, while Langhaus, Curling, and others locate it in the interior of the tubule itself. Reclus was able to remove the nodules when he resected portions of the seminal ducts, thus showing their connection with the ducts. He believes the process to originate in the endothelial envelopes of the tubules, the lumen being secondarily affected. Murphy, in a recent article, supports the view of Virchow and others by saying: "As in the majority of cases the infection probably takes place through the blood-current, it seems reasonable to suppose that the primary lodgment of the bacilli is in the intertubular connective tissue of the epididymis, and this view is certainly supported by studies of tuberculosis in other organs."

Curling, in his work on diseases of the testis, and quoted by Senn, expresses the opinion that the point of origin is in the interior of the tubule, and continuing says: "Anatomic considerations indeed support the opinion that abnormal nutrition in the cellular contents at the tubes induces the formation of miliary tubercles in their walls, without at all negating the development of tubercle in the intertubular tissue as seen by Virchow, or in the adventitia of the blood-vessels as observed by Nepveau.

"Indeed, the discrepant views upon the matter may be explained by assuming that different observers have regarded what has been found in particular cases as the result of some general law. With reference to this, the suggestion of Klebs is valuable. Admitting that in acute miliary tuberculosis, where the dissemination of the virus is affected by

the vascular system, the blood-vessels and their surroundings are the seat of the tubercles, he has seen preparations from Langhaus where the tubercles were in the interior of the tubules, and Klebs adds that 'it would be very desirable to ascertain whether this was uniformly the case in the so frequent extension of tuberculosis from the older nodules in the epididymis to the body of the testis.' "

But let the starting-point be at either of the three mentioned places, the presence of the bacilli cause an increase in the fixed tissue-cells, an increase in the blood-supply, and an influx of white blood-cells. This is the elementary tubercle; as it progresses we note formation of giant cells, some of which contain tubercle bacilli. These giant cells generally occupy the center of the tubercle, being surrounded by the epithelioid cells, which are derived from the fixed tissue-cells, and these in turn surrounded at the periphery by white blood-cells. Vascularization of the tubercle ceases at a certain stage of growth, and this, together with the toxins of the bacilli, causes caseation. The seminal tubules show degenerated epithelium, and some show separation of the membrana propria. The walls of these degenerated tubules are infiltrated with round cells, and their interior shows multinuclear granular masses of exfoliated epithelium and debris, which, on cross-section, may markedly resemble giant cells. The process may stop at the point of caseation or may go on to liquefaction, either with or without secondary infection.

In conclusion, the following deductions are presented:

1. That the epididymis is the most frequent starting-point of the urogenital tuberculosis.
2. That it is usually secondary to some other focus, but may be a primary deposition.
3. That the testicle is rarely primarily affected, but, as a rule, secondarily so from the epididymis.
4. That primary infection usually occurs by the blood-stream, possibly rarely by coitus.
5. That when the epididymis is primarily infected through the blood-supply, the process is probably an intertubular one.
6. That when secondary to other foci of urogenital tract, constituting a descending infection, the process is probably intratubular.

LOUISVILLE.

REPORT OF A UNIQUE CASE OF THE LOSS OF BEARD AND HAIR.

BY J. R. CLARKE, M. D.

I have been in the regular practice of medicine for forty years, doing a country practice for about thirty years and city practice the balance of the time. During these forty years it is reasonable to suppose that I have been called upon to diagnose and treat almost every variety of disease that the human family is heir to. I am frank to acknowledge to my professional brothers that I never saw nor read of such a case as the one I propose to report to you now; believing at the same time it will interest the many readers of your valuable paper.

Mr. H. C. G., the subject of this report, was born in this county, in which he now lives. He has spent all his time here, except ten or twelve years which he spent in Louisville. His vocation in life has been mostly that of a farmer. He is now 86 years old, and was an active business man in his earlier years. He has the appearance of a man of fine constitution, with almost uninterrupted good health and good habits, except the use of liquor occasionally to excess. His health remained good up to about ten or twelve years ago, when he was attacked with hemoptysis, which continued up to about twelve months since. Sometimes he would be confined to his bed for weeks and months from exhaustion by loss of blood, and was expected to die at any time. Then he would get better until he could be up for some time and be able to go about. During the time of his illness from hemoptysis he had no pyrexia—no complications. This was the condition of his health up to about twelve months ago, when he arose one morning feeling as well as usual. After washing his face and combing his hair he ate breakfast, then went into the sitting-room, began reading, and became so interested that when his wife asked him to get ready for dinner he was very much surprised, as he did not think it possible for the time to pass so rapidly. He threw down his paper, washed his face, and went to the glass to comb his hair and beard—the latter, which was thick and long, reaching down on his breast. Finding the beard somewhat tangled he parted it with his fingers and smoothed it out a little hurriedly. He went to dinner feeling as usual, not dreaming of any thing out of the ordinary. As his wife handed him a cup of coffee he was very much astonished by her asking what was the matter with his whiskers. He answered, nothing; at the same

time grasping his beard, and, with a little pull, to his utter astonishment it slipped from his face and he held it in his hand. Getting up he went to the mirror to see if he could find out what was the matter. His beard was all gone except a few little bunches scattered over his chin and the sides of his face, which he brushed off with his hands. He then commenced examining his head. His hair was all loose on the scalp, and by rubbing it with his hands soon all of it came off, leaving his head perfectly bald and his face beardless. It has remained so until the present time. In a few days all the hair disappeared from his body. I know of no cause for his hair falling out in the manner it did. He had not been taking any medicine to cause it. A short time after losing his hair his eyesight began to improve, and kept on improving until he could read a newspaper without glasses, while before this time he required a very strong plus glass. He has not had a single hemorrhage, and his general health is better than it has been for years. I will further state that there is no abnormal sensibility or action of the skin; has a very unsteady, tremulous hand, especially the right; sensibility and motion normal, except hand shaking. This briefly describes the case.

MARION, KY.

MITRAL REGURGITATION PRODUCED BY THE EFFORTS AT RESUSCITATION IN A PARTIALLY ASPHYXIATED NEWBORN BABE: REPORT OF A CASE.

BY LEON L. SOLOMON, A. B., M. D.

Professor of Clinical Medicine and of Materia Medica, Pharmacy, and Therapeutics in Kentucky University, etc.

On November 30th last I was present in the accouchement of Mrs. B. W., primipara, age twenty-seven. A presenting funis which prolapsed, the right hand also presenting, and the tardy completion of an occipito-posterior explains the delivery of an almost completely asphyxiated baby, which was otherwise a robust specimen, of healthy parentage, a girl weighing $7\frac{1}{8}$ pounds. Respiration was entirely absent, nor could the faintest cardiac action be made out at birth, though a distinct fetal heart-sound, 142 per minute, had been noted an hour previous. Efforts at resuscitation were promptly undertaken, and consisted first in swinging the infant perpendicularly by the feet, pendulum-like, with the head downward, from side to side, for some

seconds, followed by tappings over the precordium with the bare hand (so called "Herz massage"), the baby now in the recumbent posture, while alternately hot, then cool water was dashed on its thorax and face. The color of the skin kept pink throughout, but it was not until after five minutes that faint heart-sounds became audible. Breathing still remaining absent, necessitated artificial respiration, chiefly by the Sylvester method, and aided by rhythmic traction on the tongue and by the insertion of the finger in the anus, as also by slapping across the back and by plunging in hot water and likewise in a mustard bath—all, however, to no purpose nor effect. The cardiac action was kept up by occasional swinging by the heels, as already indicated, and by repeated application of the heart massage. The sounds, at first faint and indistinct, slowly became more audible, and there appeared also a faint pulse at the radius, but respiration was still absent, notwithstanding the continued good color of the babe.

We now undertook to blow into the mouth of the infant, and by external pressure to force this air out again. After a few such efforts on our part there was heard a distinct, blowing apex bruit, which, from the direction of its transmission, was diagnosed regurgitation at the mitral orifice. The murmur was associated with slight acceleration of the pulse. The strange feature, however, was the disappearance of this bruit when I ceased, for a few seconds, to blow air into the baby's lungs, and its prompt reappearance at once air had been forced in again. The explanation of the production of the valvular leakage is the interesting point. Seemingly its *modus operandi* was entirely mechanical. In the two hours during which it was necessary to blow air into the infant's lungs before artificial stimulus could be withheld, there was ample opportunity to detect the alternate appearance and disappearance of the murmur. To reason out the exact production of the leakage is interesting, and either one of the three following explanations seems plausible, namely: First, over-distension of the lungs, mechanically interfering with the proper action of the heart, and incidentally the proper closure also of the left ventricle, consequently regurgitation; second, inability of the mitral valve to close, incident to the relatively large volume of blood in the left auricle, the latter dependent upon the tremendous stimulus to circulation which such artificial respiration as that practiced must necessarily have meant; (b) in the event, however, of applying the rule "inspiration favors venous flow, and expiration favors arterial flow," it seems that a

tricuspid murmur would more likely have been produced than a mitral, except probably for the fact, "mitral lesions are more common than tricuspid;" third, the leakage may have occurred because of faulty innervation, produced by the action of artificial respiration in accelerating the circulation.

Personally I am inclined to accept the first view as set forth above, which seems best to explain the working cause, and in reaching this conclusion I am not unmindful of the frequent palpitation and less frequent functional murmurs met with, and occurring after exertion or fright, which quicken and deepen breathing and likewise accelerate the circulation. At any rate, the case is reported because it was unique in my experience. Finally, an *insertio velamentosa* was another uncommon feature of this case.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, June 14, 1901, the Vice-President, B. A. Allan, M. D., in the Chair.

Dr. F. C. Simpson: Three weeks ago to-morrow I saw a rather peculiar case. When I first saw the case I thought the trouble was something quite serious, but it did not prove to be.

I was called at two o'clock in the morning to see a gentleman, aged sixty-one years, who was unconscious. His wife was in bed asleep, and he was lying on a sofa, and as he attempted to get up he fell on the floor. His wife heard him fall, roused up immediately, and awakened the family. In about fifteen minutes I was at the bedside of the patient. He was unconscious; he had stertorous breathing; his pupils were well dilated; he had no evidence of paralysis; he could move his arms and legs, etc. He looked as if he had had a hemorrhage into the brain, and I so expressed myself at the time. After working with him about an hour he seemed to come from under the unconsciousness and roused up, and looked very much surprised at what was going on around him, and after another half hour he was practically at himself.

I could not get any direct history as to whether he had eaten a

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

heavy supper or whether he had been drinking (he is a man who takes his drinks regularly) until the next day; then he said he had taken several drinks in the afternoon, that he had eaten a hearty supper, and was nauseated and sick before he laid down.

So what looked at first like a cerebral hemorrhage, I take it, was a congestive condition which was rather remarkable in that it caused the peculiar breathing which we so frequently see in attacks of hemorrhage. His urine has been examined since and nothing abnormal found.

Discussion. Dr. William Bailey: It is a little peculiar if there was rupture of a blood-vessel that he had dilated pupils, that there was no paralysis, and that recovery was so prompt. I take it that possibly from some cause it was simply a disturbance in the circulation, a temporary disturbance in the nutrition of the brain; but I hardly think it could have been apoplexy. I hardly think it could have been rupture of a blood-vessel; had it been, the results would have been more serious. It may have resulted from his indulgence in alcohol.

Dr. F. C. Simpson: This man had syphilis many years ago, still I do not believe that played any part in the present trouble. He had typical stertorous breathing.

Some Personal Experience with Facial Erysipelas. Dr. S. G. Dabney: I have been requested by several of the members to give a short account of my own case of facial erysipelas, and while there is nothing of unusual interest in the experience, it will afford me pleasure to outline the symptoms and progress of the attacks, as there were two.

I had been treating a case of mastoid disease, and operated upon the patient not many weeks ago; he left the infirmary nearly well, and came back to my office one day with an attack of erysipelas. I exercised the usual precautions in treating the man, washing my hands carefully before and afterward, using also bichloride of mercury; but I am confident in looking back over the case that on some occasions while dressing the man I put my hand up about my ear. It did not occur to me until I was reviewing the matter that at the time I had a small abrasion there. I now remember that when the barber shaved me he made a slight cut on my ear.

Two weeks ago to-night I was out attending a small entertainment, and observed while there that my ear was giving me some little pain, and I had some little swelling of the glands about the angle of the jaw, these local symptoms being the first noticed. I went home and retired

about eleven o'clock, and awoke at one o'clock with a chill. Taking my temperature at that time, I found there was no fever.

The next morning my preauricular gland was considerably swollen, and there was quite a lump where the abrasion had been on my ear. I went around to see Dr. Leavell, and he opened this little lump and squeezed out a few drops of matter. I suggested that it might be erysipelas, but it looked then a little uncertain, and we decided we would wait a shorter time longer before applying the proper treatment for this condition.

At eleven o'clock that day an old schoolmate of mine, Dr. Young, came in the office, and I asked him to look at my ear and tell me what was the matter with it. He said at once that I had an attack of erysipelas, and asked me if I had not been exposed to it. I then related the history of the attack, and he felt confirmed in the opinion that he had expressed. He said "there is a specific for erysipelas, and that is ichthyol pure." He further stated that sailors frequently came into the marine hospital, of which he is surgeon in charge, with erysipelas, and this remedy had been found to give almost complete relief in a short time. The books recommend an ointment from twenty-five to forty per cent, but Dr. Young said he had not found that strength satisfactory. I did not want to lose any time, so I telephoned a drug store to send me some of the pure ichthyol, and painted the inflamed area.

At one o'clock that day my temperature had risen to 101° F., and I went home and went to bed. Dr. Leavell looked after me while I was sick. This was on Saturday. My temperature rose steadily, until Monday night it registered 104.5° F. I had very little pain and very little discomfort. On Tuesday night at one-thirty o'clock my temperature suddenly subsided, the disease terminated by crisis, I had a most profuse perspiration, and was conscious that my fever was gone.

The next morning I felt perfectly well, was able to partake of some breakfast and go about my room, etc. I remained in the house a few days longer, although the local evidence of the trouble had disappeared and I felt entirely well. I went down to my office feeling quite well, but forty-eight hours afterward I noticed a small red spot on the same side of my face just in front of my ear. That developed just as the previous attack had done into a well-marked erysipelas, not seeming to be controlled quite so well as the first attack, running up into the scalp, spreading over one third of that side of my face. My temperature again ran up to 104° F., the disease again terminated by

crisis, the temperature coming down rapidly, with almost immediate relief.

This is about the extent of my personal knowledge of erysipelas. I have been well for a week and have had no bad consequences whatever, except that I felt a little "shaky" for the first few days after I came out. I lost three or four pounds in weight, and doubtless was somewhat anemic.

The only practical point I can deduce from my personal experience is that pure ichthyol perhaps had some little effect in lessening the extent of the disease. I took no internal medication except panopepton, bouillon, etc. I also took Pluto water in the morning to keep my bowels open, and had three or four actions a day. Pluto water was all that I took internally in the way of medicine, except in the second attack I took some strychnine, in $\frac{1}{80}$ -grain doses, which I am still taking.

Discussion. Dr. F. C. Wilson: Erysipelas is an exceedingly capricious disease; it seems to travel where it will and stop where it will in spite of any remedies we may use. I do not know of any disease that is calculated more to shake my faith in medicine than erysipelas. I recollect while on duty in the Charity Hospital in New York meeting with a case which I saw in the very beginning, just as Dr. Dabney has described. It commenced on the side of the nose in a little spot. I had been taught that it might be cut short if seen at the onset and proper remedies applied; that the extension of the disease could be prevented. I commenced to work with this case with the remedies then recommended; hyposulphite of soda was popular at that time. I made an application of this agent, thinking that the disease would disappear by the next day. The next day it had extended, and the medicine I had applied seemed to have had no effect. I tried it another day, and it extended the same way; then I tried something else. I finally tried sulphate of iron, which had no better effect; the disease continued to extend. Then I used tincture of iodine, making a "fence" around the diseased area, but it jumped over that. Meantime I used tincture of iron internally; I tried quinine and glycerine; finally I resorted to Higginbotham's method, ninety grains to the ounce of nitrate of silver, building a "fence" around with that, but the disease jumped over this in the same way. I looked up all the text-books I could find, and in that one case tried every thing that had been recom-

mended, but the disease traveled along at the rate of about one inch per day. It traveled over to the other side of the face, through the scalp and down the back to the sacrum, down the arms to the tips of the fingers, and at last it ceased about the time my patience was exhausted.

Erysipelas seems to last about four days at any one point and then get well; nature cures it really by vesication. And, by the way, just at the close of this case an old country physician from the central part of New York State came through the hospital visiting, and of course discussed the subject of erysipelas. He gave us his experience in an epidemic in his neighborhood, and mentioned his use of cantharido-collodion, pursuing nature's mode of curing it. As the inflammation lasted at any one point four days, if on the second day you apply a blister you really save the last two days; you make the fourth day of the disease the second day. He stated that he had used the fly blister on the face of ladies without producing any scar or any disfigurement, not running as much risk in doing that as you do in allowing the subcutaneous inflammation to develop. Of course where the subcutaneous tissue is involved, it will necessarily produce more or less scarring, but simple vesication leaves no scar.

Narcolepsy, with Report of Cases. Dr. J. A. Ouchterlony: Some time ago, in glancing over a medical journal, I found that a gentleman, whose name I have now forgotten, called attention to an abnormal condition which he designated by the name of narcolepsy, which consists of a sudden, irresistible inclination to sleep, coming on at frequent and irregular intervals. I then began to think over the matter and to look over the clinical records of my cases for some years back.

First of all I thought I realized that narcolepsy, not only in sound, in style, but in clinical features, must bear some resemblance to what is known as narco-epilepsy; but in looking over the history of the cases that I had seen I found that there was really nothing epileptic about them, as will be shown a little further on.

In narco-epilepsy, of course, you have true epilepsy; in this condition (narcolepsy), whatever it may be, there is no real epilepsy, but simply all of a sudden the patient is unexpectedly seized with an irresistible inclination to sleep, the sleep lasting for a variable period. There is no spasm, there is no change in the pupils, there is no aura,

nothing that is characteristic of epilepsy, either grand mal or petit mal. It is an interesting clinical condition, whatever may be its etiology, and I rather think that the etiology must be different in different cases, as the patients that I have seen differ in sex, age, and in various other respects.

The first case was a lady aged about fifty years. About the menopause she would be sitting playing cards, for instance, and all of a sudden she would fall asleep; she would sleep for a little while and then wake up. In the course of the afternoon she would be engaged in crocheting, knitting, or in conversation, and all of a sudden she would be absolutely unable to resist the tendency to sleep. I can remember that sometimes there would be at the same time a number of erythematous spots on her neck, which faded away very speedily. In the course of time this peculiar condition passed away of itself. I do not know just how long it lasted. The lady lived to be seventy-eight years of age, and then died of cerebral hemorrhage. She was a gouty subject and rather stout, but had enjoyed, as a general thing, remarkably good health, twenty-eight years having elapsed from the time when these symptoms mentioned were observed until her demise.

The second case was a gentleman aged about forty years, of fine physique, strictly temperate, a teetotaler. He had had syphilis, however, a number of years before. He had taken exceedingly good care of himself, and had made repeated visits to Hot Springs, Arkansas. The utmost cutaneous manifestations consisted in the first place of syphilitic erythema (roseola) in the earlier stages, some falling of the hair, and glandular enlargement; later on, the occasional development of a vesicular eruption on the palms of the hands. He had no sores upon his person. At one time he had a well-marked congestion of the liver, with well-marked enlargement of the organ. He suffered from malaria, and made a visit to Carlsbad with a great deal of benefit. From time to time he would visit me and tell me that he would be seized at times with this irresistible desire to sleep; that he would be at the theater in the midst of a side-splitting farce, and all of a sudden would fall to sleep; that his wife would have to poke him in the ribs to wake him up. In the evening, sitting in the parlor with company, all of a sudden he would fall asleep. After his visit to Carlsbad this tendency became less strongly marked, and finally passed away, and recurred only at long intervals when his general condition of health was somewhat below par. He is now in perfectly good health.

The third case was a gentleman about forty years of age, obese, inclined to the excessive use of alcohol; he would go on sprees, and suffered from considerable dyspnea. On consulting me he told me that the difficulty with him was that he could not keep awake; that he would fall asleep in the middle of the forenoon, in the middle of the afternoon, at any time in the midst of engrossing business occupations. There was some slight enlargement of the liver; there was hypertrophy of the heart, though this was not excessive; and there was a double systolic cardiac murmur, aortic systolic and mitral systolic; he had a very ugly and troublesome naso-pharyngeal catarrh. But under treatment addressed in the first place to invigorating the heart, in the second place to re-establishing the secretions and overcoming the very decided lithemia, he got rid of this difficulty.

The fourth case was a young boy about seventeen years of age, unusually well supplied with adipose tissue for his age, and intellectually rather dull; he had to spend a long time over his lessons, and it took a great deal longer time for him to learn them than was necessary in the average boy. He distressed the father and mother very much by these suddenly recurring attacks of sopor. He told me that sometimes in taking a bath he would fall asleep in the bath-tub. Of course it goes without saying that he would fall asleep over his lessons. He would fall asleep at any time and anywhere. He would fall asleep even while he was eating. He had a very strongly marked oxaluria. I put him on a diet excluding fat-making foods, and gave him—I want to say I thought his heart was fatty, not in the way of fatty degeneration, but simply in having a deposit of fat around it, so as to make its action more laborious—I gave him strychnine, put him on nitro-muriatic acid, and the diet I have mentioned, and he steadily improved, losing flesh at the same time.

These are all the cases of the kind that have come under my observation, and the exact nature of them I do not know, and I do not think any effort has been made to explain their occurrence. I do not believe there is any organic cerebral lesion. I feel inclined to interpret the symptoms by supposing that either there was a frequently recurring change in the cerebral circulation, a sudden lessening in the blood-supply to the brain, so as to produce a condition analogous if not identical with that which we know exists in physiological sleep; or else there was such an accumulation of effete material in the blood as a result of defective metabolism as to bring about this state of things.

Every one of the cases, either spontaneously or as a result of treatment, got well.

Discussion. Dr. H. H. Grant: It has just so happened that I have seen two cases very much resembling those described by Dr. Ouchterlony; neither of them, however, has been under my personal care. One of them was merely casually observed; the other one I happen to have a pretty good history of. This was a young boy who at about his fifteenth year was a farmer boy; he grew up in the country, and lived in a neighborhood that I knew intimately before I began the study of medicine. The peculiarity we all noticed about him, and his family noticed, was that he would fall asleep suddenly, as has been described by Dr. Ouchterlony, at all sorts of irregular times. He would go to sleep while riding horseback, while working in the field, even following the plow. This became so manifest that it was impossible for him to follow the work of a farmer's boy. When he grew up, and was more or less in country society, he would go to sleep during an evening's entertainment, or in the parlor with other boys and girls. This sleep did not last him usually more than five or ten minutes, perhaps not even so long as that; say in from five to eight minutes he would wake up, and when aroused he was conscious of the fact that he had been asleep, but he made no other manifestation. He usually did not allude to it, and no one else alluded to it. This has continued until up to the present time; it has not entirely disappeared, but in the last five or six years it has greatly diminished, so that now perhaps for two or three days he will not have any of these attacks. In none of them was there any evidence of spasm; he would simply drop to sleep and wake up after a little time. For the last year and a half I have had no opportunity to observe him, but understand from some of his friends, and those who have seen him in that time, that the tendency has greatly diminished. He is now a man fifty-five years of age. I do not think at any time any treatment was ever instituted for it; if any thing, it was nothing more than his country physician suggested. He is a man of fairly good intelligence, more or less as he grew up a philosopher; in politics and in religion he had some original ideas, and was a man of first rate business ability. He has had good health in every other particular; he has no indications of disease, either gouty in character or of any liver affection. He has always been a man of quiet, sober habits; never very industrious, with a very good mind but a moderate

amount of education, because he had no inclination to study as a boy, and was not able to prosecute any especial plan of study had he chosen to do so.

As Dr. Ouchterlony has stated, I have seen nowhere any suggestion that positively described the pathology of the condition, but in the majority of cases it seems to me the suggestion he makes, that there must be some temporary and very prompt interference with the metabolism or change in the poisons within the circulation that produces this singular distressing effect, is probably the correct solution.

Dr. Turner Anderson: I do not know that I can recall a marked case of this character. We can all theorize in regard to why people fall asleep, and from a scientific standpoint the question is of much interest. I have seen people—even young people—who seemed to oversleep, sleep more than was natural. I think I have observed people who belonged to the class Dr. Ouchterlony has spoken of, those that had been the subject not of fatty degeneration, but deposits of fat, as the laity would tell us, “fat around the heart.” I have also seen some in whom this condition was associated with a phlegmatic condition of the system, with a slow pulse. I can recall an over-fat subject that I had under observation for a considerable length of time who finally died, who did not die from any special fatty degeneration of muscular structure that I could make out, but simply had a very slow pulse, who was phlegmatic; the patient was not particularly bright; he simply declined and finally passed away. In those cases coming on suddenly a vasomotor disturbance may be the cause of the condition. Whether a sudden change takes place in the circulation, or whether it is associated with vasomotor disturbance which brings about a sudden physiological enema, it is hard to say. When I look back over my records, especially the one case to which I have alluded, I am inclined to believe that the suggestions made by Dr. Ouchterlony are correct.

Dr. William Bailey: After thinking over the subject, I am inclined to believe that the trouble in these cases is due to some vasomotor disturbance. The erythematous spots on the neck in one of the cases reported would indicate this, and it would be interesting to know if in this case, preceding the attacks, there were present any of the characteristics of true epilepsy. We do have vasomotor disturbances which produce results, and, without being able to determine the definite pathological condition, I am inclined to think that this influence on the vasomotor system may be due to toxalbumens or some other poisons

in the blood in those cases that are lithemic, or where we have evidence of disease rather than health an over-deposit of fat, but the function of the heart being interfered with simply by the presence of an excessive amount of fat. I think that the management of his cases, too, is in keeping with this idea, to improve the nutrition, particularly that factor of nutrition pertaining to the elimination of effete material, because nutrition should contemplate not only the supply but the removal of waste; and I think this is a point we must look after in the management of these cases, to secure better metabolism, better change of tissue, better elimination of waste and toxic products.

Dr. B. C. Frazier: I would like to mention a case reported by Dr. Cashin before the Falls City Medical Society not long ago, the most intense case of this kind that I have ever heard of. The patient was a negro, eighteen or twenty years of age, whose condition was such that even a game of "craps" would not keep him awake. He would frequently fall asleep while engaged in shooting craps.

Dr. J. M. Mathews: I would like to ask Dr. Ouchterlony, when he comes to reply, if it is not a fact that the condition he described is not largely restricted or confined to obese people. There is one very notable case of this kind that I recall in the person of one of the most famous lawyers Kentucky has ever known, Judge H. M. He was a man that weighed about three hundred pounds, practicing, at the time I had the opportunity of observing this feature of his case, in the Henry Circuit Court. While listening to evidence in an important case he would frequently go to sleep; not only did he go to sleep, but I have heard him snore upon different occasions during testimony that was being given which was vitally important in the case. It was said of him that he heard, even during this deep sleep, every thing that was testified to in the case. Upon one occasion he was taking testimony with a number of lawyers at a hotel in New Castle, and suddenly, without warning, he went to sleep and fell out of his chair. The other lawyers lifted him up, poured cold water into his face, etc., supposing he had an attack of some kind, and I remember he remonstrated with them severely for doing any thing of the kind.

In all the cases reported by Dr. Ouchterlony except one, I noticed that obesity was a factor. Is it not a fact that if it is true that these cases are generally or always obese, that herein we find a solution to the matter? Is it natural to suppose that in these people you have a reduced circulation or an anemic condition, as spoken of by several

members, which is conducive to sleep? Is it not just the opposite? We are supposing, of course, that the heart's action is interfered with, but that the brain is filled with blood. That there is disturbed metabolism can not be doubted, but if due to this effete material or poison, why does it come on so suddenly, and why does it leave so suddenly? Why are not these people more or less under the observation of physicians, if it is due to poisonous condition of the blood circulating in the brain? I would imagine it was only a temporary interference with the circulation, and not a diseased condition of the blood. As soon as that passes away the man wakes up and goes on until another attack.

Dr. J. A. Ouchterlony: I would simply suggest, in connection with the remarks of Dr. Mathews, that there might be a sudden increase in the amount of toxic material in the blood sufficient to account for this condition, and one which is not at all permanent so far quantity is concerned. Or there might be a complex state where there would be defective metabolism and sudden interference with the circulation at the same time.

The second case was one who was vastly improved after a sojourn at Carlsbad Springs, where the treatment was directed toward re-establishing every action of the viscera. This gentlemen, while he was not obese, still when he returned he had lost flesh, and at the same time he had gained in strength.

Angina Pectoris. Dr. J. A. Ouchterlony: It may be interesting to the members to hear just how one of Louisville's most prominent lawyers died recently. I refer to Mr. J., whom you all knew. Two weeks before his death he was suddenly seized with an attack of angina pectoris while at his office, and, contrary to what is usually the case, the attack was extremely protracted; his sufferings were most intense, so much so that he was doubtful whether he would be able to reach his home alive. Immediately upon his reaching his home I was sent for, but not being at hand they sent for the nearest physician, who happened to be Dr. Sidney Myers. The doctor recognized the anginous character of the attack, but not having seen the patient before, being unfamiliar with his history, did not know whether to designate it as true angina or pseudo-angina. The pain was referred not so much to the cardiac region as to a more sternal region, and the pain that generally extends down the left arm extended down both arms. After several doses of morphine, administered both by mouth and hypodermatically, he obtained incomplete relief. He had several attacks. Dr.

Anderson was kind enough to see him with me. A notable feature of it was the extreme weakness of the central organ of circulation; we could not get any apex beat; we could hardly hear the first sound over the apex; we could hardly distinguish any heart sound over the base. He had three attacks previous to the last; meantime he had developed, first, symptoms of intercostal neuralgia, which served to divert his attention from the heart; secondly, a good deal of hepatic derangement, the liver being somewhat enlarged, and besides that Dr. Anderson discovered some loss of resonance and the presence of some rales posteriorly.

Exactly two weeks from the day when he was first seized, when he felt absolutely well, all of a sudden he had an attack which terminated fatally almost instantaneously.

This case brought to my mind two other cases of angina pectoris which had terminated the lives of two prominent citizens of Louisville. One was the late and lamented Judge F., who died exactly two weeks from the date of his first seizure; the other was the case of Mr. H. B., who also died exactly two weeks from the date of his first seizure. This has happened so often in my experience that I called Dr. Anderson's attention to it at the time.

Discussion. Dr. Turner Anderson: If there is any one thing of which a man as he advances in years stands in personal dread, it is that disease known as angina pectoris. I have not had very much experience in these cases, but there are a few things to which I would like to call attention. From the remarks of Dr. Ouchterlony I think we may learn a lesson that will be of value to us in our cases. I was quite surprised several years ago when I was asked by Dr. Ouchterlony to see in consultation a prominent and wealthy citizen of Louisville, who had suffered an attack of angina. He had suffered very severely, the attack had passed off, and he was perfectly comfortable. There was nothing about the case when I visited the man in consultation that caused me any especial apprehension. I had been called in consultation for the purpose of determining whether, should there be a return of the paroxysm, it would be well to leave instructions for a hypodermic injection of morphine. The doctor seemed to have had the idea that the man would require immediate relief should another attack supervene, and had suggested the different remedies ordinarily used in such cases, but he had not ordered an hypodermic injection of morphine. We agreed that if there was a recurrence morphine would be proper if

he did not get prompt relief. I was surprised at his declaration at that time, because it was a matter of information to me, that he believed the man would not survive two weeks; that the cases he had observed coming on in that way, there would be a second or third recurrence within a fortnight, and it would terminate fatally. There was nothing about the patient that created any great apprehension in my mind. He had a recurrence a short time after we left, an hypodermic injection of morphine was given, and he was made comfortable; he recovered from this attack and was comfortable afterward. I saw him no more. He had a third attack within the period of a fortnight and suddenly died. This circumstance made a deep impression on my mind.

I saw Mr. J. in consultation, as stated by Dr. Ouchterlony, and incidently referred to his previous declaration; this patient also died within two weeks.

I do not know that we can tell how long any man is going to live after he has had his first attack of angina pectoris, but from the information I have on the subject, we ought to be very much on our guard when we consider this subject from a clinical standpoint.

The late Mr. J. R. B. sent for me hurriedly in the absence of his regular medical attendant; he had an attack of angina, and was in a terrible condition. When I reached the house he was perfectly comfortable. I could not detect any thing in an examination that would forebode any especial evil. That was his first attack. I ordered some nitrite of amyl, and suggested from the description of his illness, pain, etc., that he was in danger. I ordered also some aromatic spirits of ammonia. Before I had driven about six squares to my office a message came over the telephone to return at once to Mr. B.'s house. I drove back as rapidly as possible, and when I reached the house he was dead. He died in his second attack. They did not have time to get any of the medicine which I had ordered.

When one decided attack of angina pectoris has occurred, I think the observation of Dr. Ouchterlony is correct, that the patient rarely survives over fourteen days.

Dr. J. G. Cecil: My attention has never been called before to any special time limit in connection with cases of true angina pectoris. It is well known, of course, to all practitioners of medicine that a person may have pseudo-angina lasting throughout a long time. I am inclined to believe, especially since hearing the reports made by Dr. Ouchterlony and Dr. Anderson, and also from those cases of true angina that I have seen in my practice, that the time limit is a very

short one. I have seen cases, one that I can recall especially, in which death took place in the first attack, only a few premonitions, not amounting really to an attack of angina; death occurred in the first attack within five minutes from the time the attack was manifested. All the text-books teach us that angina pectoris is liable to terminate suddenly at any time when once it has manifested itself, and I believe it is our duty to provide such patients as may come under our observation with the best possible means of combating this condition. We should advise them to carry nitrite of amyl to be used whenever they feel an attack coming on. I believe there is some hope even in cases of true angina from prompt medication of this character.

The fact especially emphasized by Drs. Ouchterlony and Anderson, the time limit of two weeks in these cases, had never occurred to me except in a general way. My observation, reading, and teaching had taught me that all cases of angina were liable to terminate fatally, but exactly how quickly after the original or first attack had never been so impressed upon me before.

Dr. William Bailey: I recall one case of angina pectoris where apparently the attack had been excited by unusual muscular effort; the man had been using a saw, and, not being accustomed to it, it was thought the angina was excited by undue exercise of the arm. When I reached him he appeared to be perfectly comfortable, but I remember prescribing some nitro-glycerine and nitrite of amyl, with the view of having these remedies ready in the event of another attack. The next morning before breakfast, while lying in bed, he asked his wife to bring him a cup of coffee, and before she could reach his side he was dead. He had a case of true angina.

Another case was a man prominent in Louisville for half a century, who, for a long time, was under my observation, and who had what I regarded as true angina. By my advice he carried in his pocket a little bottle of nitrite of amyl, and relieved himself many times. One of the causes of this condition, it appears to me, is a vasomotor disturbance, and this would explain the relief that comes from the administration of nitrite of amyl; but more permanent relief, I think, will result from a moderate dose of morphine, with large doses of atropine hypodermatically.

I know of another case which has been relieved by prompt use of nitrite of amyl on several occasions, but it is probably a fact that in the majority of cases the patient does not survive more than two weeks, as has already been stated.

B. C. FRAZIER, M. D., *Secretary.*

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PLASTIC SURGERY.

The progress of modern surgery has been such as to enable us at present to do almost any kind of plastic surgery with so much certainty that the careful, expert modern surgeon may now accomplish so many things that he at times seems to possess almost a supernatural power. The rich nerve- and blood-supply to the face makes it the most successful field for the display of plastic surgery. There is scarcely any deformity about the face, neck, or nose, it matters not whether it is congenital or acquired, that may not now be corrected. The saddle-back nose is elevated with as much ease and certainty as a fractured limb is put into position; the most hideous hare-lip mouth is shaped up so as to make it "kissable," and to make it serve all the purposes that any other mouth serves. The "crow-feet" made upon our faces by time may be eradicated and nice smooth surfaces left in their stead. The miss with the exaggerated Roman, Hebrew, or turn-up nose may have it converted into any shape she desires, if she only has the money and will put up with a little privation for a short time. Moles, warts, and other blemishes about the face and neck are now disposed of with no trace left. Recently it has been determined that irregularities may be evened up by injecting sterilized vaseline beneath the skin, where it will remain indefinitely without giving trouble. Many small wounds

of the face can now be closed without stitching, thus reducing the chances of producing a scar to a minimum. The field for plastic surgery in gynecology has a wide area, and the high state of perfection to which the art has been brought by the modern gynecologists goes to show that the workers in this field have not been idle. The reparation of a lacerated perineum or the closure of a vesico-vaginal fistula is accomplished with almost as much certainty as the closure of an incised wound on any other surface of the body.

HER ALUMNI HONOR HER.

The election of Dr. John A. Wyeth President of the American Medical Association magnifies the established fame of his professional alma mater, the Medical Department of the University of Louisville. This second oldest institution of its kind west of the Alleghanies has contributed in Dr. Wyeth its ninth president to the American Medical Association, a record with which that of no other school can begin to compare. Dr. Wyeth is the third alumnus in the list of American Association presidents, the first being Dr. David W. Yandell and the second Dr. Joseph M. Mathews. There were seven presidents who were members of the University faculty. They were Drs. Henry Miller, Paul F. Eve, S. D. Gross, Austin Flint, T. G. Richardson, and Theophilus Parvin.

THE Supreme Court of Ohio has rendered an important decision which established the right of the Ohio State Board of Medical Registration and Examination to determine when a medical college is in good standing. The board rejected the diplomas of the Hygeia Medical College of Cincinnati, and the college applied for a writ of mandamus compelling such recognition. "The court sustained the board, the decision in effect being that a writ of mandamus will not issue, on the relation of a medical college, to compel the State Board of Medical Registration and Examination to recognize the college as a medical institution in good standing, nor to compel the board to issue certificates to practice medicine in that State to holders of diplomas from such college. Decided March 26, 1901. This decision will establish the Ohio board on a firm foundation, and the precedent thus created will strengthen the hands of boards in other States."

Current Surgical and Medical Selections.

THE PHYSIOLOGICAL EFFECTS OF EXTRACTS OF DUCTLESS GLANDS.—Dr. Richard E. Cunningham read this paper to the New York Academy of Medicine. He objected to the use of the ordinary desiccated extracts of the ductless glands on the ground that there was good reason for believing that they were mixtures of various substances, and that the determination of the results from their use must necessarily be very unreliable. Much had been anticipated from the administration of the extract of the pituitary body in cases of acromegaly, yet the clinical results had been disappointing. He had personally been unable to observe the remarkable effects on the circulatory system from the ingestion of suprarenal extract, described by several observers. One would expect the best therapeutic results from the administration of suprarenal extract in Addison's disease, yet the cases so far published had not confirmed this belief. Of twenty-four reported cases that he had collected, in which the suprarenal extract had been administered, not a single patient could be said to have been cured, though fourteen had been temporarily improved. Ten had been practically unaffected by the treatment. When the aqueous extract of the suprarenal gland was introduced into the blood-vessels it caused a marked fall in the blood-pressure, but if the colloid preparation of the extract of this gland was injected, this lowering of the blood-pressure was not noted.

Thymus Gland.—The thymus gland has been first introduced to the medical profession as a remedial agent in connection with the treatment of a case of pseudo-hypertrophic paralysis. In ten cases of exophthalmic goitre treated by him with dried thymus, only three could be said to have been even temporarily improved. The best results from the use of these extracts had been secured with thyroid extract. If large doses of the desiccated extract were given, the results would often be the development of symptoms apparently indicative of poisoning, with the proteid bodies constituting the impurities of the extract. On the other hand, it would often be found that the same individual could take rather large doses of iodothylin without experiencing any such toxemia. The iodothylin did not seem to be nearly so active as the colloid, from which it could be easily obtained.—*Medical Record.*

POISONOUS SNAKEBITES.—A description of the various poisonous snakes, together with a detailed consideration of their poison apparatus, is interestingly given in the *Medical Record* (September 15, 1900) by G. Langmann. The effect of the snakebite, the symptoms produced, and a review of the many methods of treatment that have been used make the article a very valuable one. The object of treatment is fourfold: to prevent absorption of the poison, to destroy or neutralize it, to accelerate its elimination, and to treat symptoms of imminent danger. If the limb

affected, as a finger, is not immediately amputated, an Esmarch or other bandage should at once be used and the circulation relieved only to prevent gangrene. Scarification, or better, either excision or destruction of the area by cautery, is advised. Locally supposed specifics have been much used, as carbolic acid or permanganate of potash. A solution of hypochlorite of lime, 1-60, has been found very effective by Calmette, and is probably the best local remedy. Ammonia and strychnine act doubtless merely as general stimulants, but they are certainly of value. The poison exerts both a hemolytic action on the blood and a destructive influence on the cells of the medulla. To neutralize these actions a specific antitoxin must be obtained. Calmette and Fraser have offered to the world an antivenomous serum which experimentally has been shown to have the power of neutralizing lethal doses of the poison injected into animals, and has been used on man successfully in several cases. The antivenene is made by inoculating horses with a mixture of poisons from several species of deadly snakes after the hemolytic agent of the poison has been eliminated by heating to 80° C. It acts as a full protective in a dose of from 5 to 20 cc. when injected even one and a half hours after the introduction of the venom. The action of the intivenene is supposed to be entirely chemical, for a certain amount counteracts a minimal lethal dose when injected at separate points, but 1-1,000 of this quantity is effective when mixed with the venom and injected. Phisalix, of Paris, has recently discovered that in the blood of some animals, as the eels, there is a substance which exerts a decided antitoxin action. Cholesterin, separated from biliary calculi and carrots, has a similar effect. The most commendable treatment is ligature of the part, scarification and injection of the antivenene, or if not at hand, the solution of hypochlorite of lime; stimulation, artificial respiration for hours, if necessary; lavage of the stomach to remove the poison which is there secreted, and encouragement of the victim, for a deep mental prostration accompanies the depression of the nervous centers.—*Medical News.*

ON THE "HYPURGIE" OF OBESITY.—Mendelsohn, editor of the *Zeitschrift für Krankenpflege*, has devised the term "hypurgie" to denote that special exercise of the physician and nurse which seeks to attain the comfort of the patient upon all occasions.

In a number of his journal Mendelsohn extracts from Van Noorden's new work on obesity various practical points which bear upon the questions of nursing and hypurgie.

The capacity for exertion on the part of the corpulent patient must first of all be determined for a given time. Those who have a normal tolerance for exertion may be made to work hard, and by following out this principle we avoid excess. The quality of the exercise must be studied. If a patient ascend an elevation 300 meters high he expends the same energy whether he takes 100 minutes or only 60 minutes for the task, but in the latter case he may overtask his heart. Both in walking on a level and in

hill-climbing, the effect on the heart and voluntary muscles must be carefully supervised. The better the ventilation of the lungs, the less liability to heart-strain.

The introduction of the bicycle into medicine is a great advantage in the management of obesity, but the heart is equally exposed to danger in this form of exercise. The fat bicyclist should never be allowed to bend forward because of the prejudicial effect upon respiration. Rowing, either on the water or with a parlor rowing-machine, is strongly recommended by good authorities, and tests made after this form of exercise show that the pulse and heart are not overtasked. Vigorous obese individuals may play active outdoor games—tennis, football, golf, etc. The principal value of gymnasium exercise lies in the development of certain groups of muscles, and the general strengthening of the entire muscular system.

On the other hand, horseback exercise is not recommended. It is good to reduce the horse's weight, but not so good in this respect for the rider.

Baths, both for the sake of cleanliness and as hydrotherapy, are of the greatest benefit to the obese.

With regard to diet, Van Noorden believes in the expediency of small and somewhat frequent meals. In this way we avoid the profound weakness which comes from an empty stomach (often causing fat women to swoon), as well as the danger of overeating.

Wine should never be taken with meals, but between meals it is often grateful. Mineral waters, weak tea, lemonade, etc., may be taken either with or between meals.—*Medical Review of Reviews.*

GUNSHOT WOUNDS AND TETANUS.—The great frequency of tetanus, following wounds from blank cartridges, is well-known. H. Gideon Wells (Philadelphia Medical Journal) has made a study of the blank cartridges on the market with the object of determining whether tetanus spores were present in them or not. Upon inquiry he found that the blank cartridges on the market were manufactured by five different firms in this country and in Canada, and samples of each of these were obtained for examination. In all about two hundred cartridges were examined, but in none of them were tetanus bacilli found.

The method of examination was as follows: (1) The wads, powder, and shells were first heated to 85° C. for forty-five minutes, and then cultures on glucose agar and other media were made. Cultures were also made without the preliminary heating. (2) A series of animal inoculations of guinea-pigs and mice were made, in various series, with wads and powder and with agar and bouillon cultures, both with and without heating. Ultimately for the examination of a large number of cartridges the following plan was adopted: Wads from ten cartridges were broken up into fine pieces and placed in bouillon sufficient to cover them; the fluid was then heated to from 80° to 85° C. for forty-five minutes, and grown for one week under anaërobic conditions. The cultures were then inoculated into mice

and guinea-pigs, and also examined microscopically. Agar cultures were made in deep stabs. The bouillon cultures were covered with paraffine, after a previous boiling. The tissues were then placed in sealed jars with pyrogallic acid.

Cartridge wads were also inserted in the muscular tissue of animals and allowed to remain there for three days to two weeks. They were then removed, or inoculated into other animals, or cultivated anaërobically. These experiments all gave negative results. Microscopical examination of the cartridge wads showed them to be made of wood pulp.—*Boston Medical and Surgical Journal*.

ACUTE AND CHRONIC GONORRHEAL CYSTITIS.—Hugh H. Young reports these cases. In the first case the gonococcus was found in pure culture in the urine. In the second case the gonococcus was found in the urine in association with the bacillus coli communis. The urine was collected by aspiration of the bladder under strict aseptic precautions.

In reviewing the literature of gonorrheal cystitis, Young was able to find only seven other cases in which the gonococcus had been demonstrated in the urine. In his opinion, this small number of cases by no means represents the frequency of gonococcus infection of the bladder. The principal reasons for this belief are: (1) The difficulty of obtaining urine by aspiration, owing to the acuteness of the inflammation, which causes the contraction of the bladder, so that it is difficult to penetrate it with the aspirating needle; (2) because the gonococci will not grow in the urine unless it contains a considerable amount of albumin. In one case of gonorrhea in which there was no cystitis the aspirated urine showed large numbers of gonococci. It thus seems probable that in the production of cystitis the gonococcus is only one of several factors in the process.

In the same paper Young also reports a number of instances in which the gonococcus was found in pure culture in subcutaneous abscesses. These abscesses developed either in the region of the urethra or in the subcutaneous tissue following operations for tenosynovitis or arthritis. For the cultivation of the organism Young recommends a mixture of hydrocele or ascitic fluid and nutrient agar-agar.—*Ibid*.

FRACTURES OF THE NOSE.—T. A. DeBlois, Boston (*New York Medical Journal*), states that a broken nose is not usually actually broken; that is, that in most cases there is no fracture of the bone itself, but rather a dislocation. The nasal bones become separated at their internal borders from the processes of the superior maxillaries. This, although accompanied by more or less violence, is not in itself a true fracture, and this solution of bony continuity is by far the most common variety of broken nose. The most important treatment is reduction of the dislocation. Unless ether is used the application of cocain should be prolonged and frequent. If the injury is recent, reduction is not difficult; careful manipulation with the

fingers, assisted sometimes by a thin, flat instrument in the naris, will raise the bones into place. In many cases, if the patient can be seen frequently and is ordinarily quiet, apparatus can be dispensed with, particularly if the septum is moderately straight. If the septum bulges on one side, if the nasal bones show a tendency to slip inward, then an internal splint should be introduced on that side. An external splint, well padded, over the bony nose will be found useful when the external borders of the nasal bones show a tendency to separate, or to protect the reduced nose from a second dislocation. If the patient is not seen immediately after the injury, and if taxis will not reduce the deformity, advantage may be taken of the elastic property of rubber to produce a gradual reduction.—*St. Louis Medical Review.*

INDICATIONS FOR THE RADICAL CURE OF HERNIA IN CHILDREN.—J. N. Bartholomew (*The Chicago Clinic*, Vol. XIII, No. 6). The author closes a brief sketch of this subject by the following recapitulation:

Herniæ in children are most frequently of the oblique inguinal variety, are easily closed and promise a better prospect of cure, with less liability to recurrence than in the adult.

Of all the cases occurring in children, eight per cent are not suitable for truss-treatment.

Trusses are not well borne by children, and are difficult to manage, and nearly fifty per cent of cases submitted to truss-treatment are still uncured at the end of three years.

Herniæ cured by truss-treatment during childhood frequently relapse after adolescence.

Generally speaking, the best time for operation is just before the child assumes the upright position, and mechanical treatment should not be persevered in after this time unless there is marked diminution of the size of the hernial opening.

The indications for the radical cure of hernia in children are:

1. Cases complicated with hydrocele.
2. Irreducible, incarcerated, and strangulated herniæ.
3. Cases in which the hernia can not be kept up by a truss without much discomfort to the patient.
4. Cases unable to obtain the care requisite to successful mechanical treatment.
5. Cases in which mechanical treatment has been faithfully tried without benefit.—*Archives of Pediatrics.*

REPORT OF A CASE OF CARBOLIC ACID POISONING SUCCESSFULLY TREATED WITH ALCOHOL.—H. Rodman (*Medical Record*) details a case of a woman, aged sixty years, who swallowed the contents of a 2-oz. bottle. Her condition when he arrived was unconscious. Lips cyanotic, conjunctival and pupillary reflexes absent, limbs cold, pulse weak and thready,

temperature per rectum 96.2°. Eschar upon lips and tongue. Having 4 oz. of alcohol at hand, he passed a stomach tube, and through it poured the alcohol into the stomach, allowed it to remain for three or four minutes, then washed the organ with dilute alcohol. The woman gradually recovered consciousness, pulse improved, cyanosis disappeared; stimulants, strychnin, and alcohol were given hypodermatically, mucilaginous drinks, with Epsom salts, by the mouth. Some reaction followed, temperature 102°, pulse 110; urine drawn by catheter was dark and smoky; nasopharynx was painful, which, he thinks, could have been obviated if it had been sprayed with alcohol. Stomach was not tender, and in five days the patient was completely recovered. He had believed he was the first to discover this method until he found several cases with the like good results on record.—*Georgia Journal of Medicine and Surgery.*

PUERPERAL ECLAMPSIA AN INTOXICATION.—Knapp (in a recent work entitled "*Ueber puerperale Eklampsia und deren Behandlung*") emphasizes the fact that the symptomatology of puerperal eclampsia is essentially that of an intoxication, and calls attention to the striking resemblance to that of strychnin poisoning. He remarks the following points of resemblance: After the hypodermic injection of strychnia it appears immediately in the blood and is quickly eliminated by the kidneys. It is believed that the toxins of eclampsia likewise reside in the blood and are also eliminated by the kidneys. Lauts has shown that strychnia may produce albuminuria with degeneration of the renal epithelium. The supposed poison of eclampsia works a similar injury to the kidneys. The effects of the toxins of eclampsia and strychnia exert a deleterious action upon the liver, and both arrest glycogenic function. Both poisons have an oxytoxic action, the pains in eclampsia being increased, while in strychnia poison a tetanus uteri results. Reflex excitability is characteristic of both poisons. Tetanus from both these causes can not be differentiated. The respiratory disturbances and cyanosis in both cases are alike. The mental states resulting from the action of these two poisons widely differ. Coma invariably supervenes in an unarrested eclampsia, but is never present in strychnia poisoning. Strychnia is a selective poison acting upon the motor mechanism of the brain and spinal cord, while the toxins of eclampsia act also on the sensorium.—*Bulletin of Cleveland General Hospital.*

THE DIAGNOSIS OF NEURASTHENIA.—After enumerating the more common symptoms of the affection and touching upon the chief points of distinction between organic and functional nervous disease, Gustavus Eliot discusses the differential diagnosis between neurasthenia and hysteria, hypochondriasis, various mental aberrations, and lithemia. Concerning the differentiation from hysteria, he says that the sudden and violent convulsive attacks of hysteria do not belong to neurasthenia, although in the latter disease slight muscular twitching and subjective quivering and

throbbing are not uncommon. The globus hystericus is common in and characteristic of the disease whose name the symptom bears, but is rare in neurasthenia. The symptoms of hysteria are characterized by violence and activity. Those of neurasthenia are of a less obtrusive character. They are more quiet and subdued. Hysteria is seen in individuals of emotional temperament, whose mental organization is not well balanced, while neurasthenia very commonly affects the intelligent and intellectual. Finally, the symptoms of hysteria very frequently disappear early and completely, leaving the patient in usual health, while neurasthenics recover slowly and gradually.—*Yale Medical Journal.*

TREATMENT OF TYPHOID.—The treatment of typhoid fever at New York Hospital is detailed by F. C. Keays (Medical Record, December 1, 1900). The routine treatment consists regularly of the use of the tub-bath given every three hours when the temperature is 103° F. or over. The bath is usually started about 80° F. and run down to 70° F. or 65° F. for a period of ten to fifteen minutes. When tub-baths are not taken well, alcohol sponge baths are used, the alcohol being cooled by ice. When there is a contraindication to baths, acetanilid, grs. iij, may be used every three hours. For sleeplessness combinations of trional, grs. xv., with codeine, gr. j, work well. The baths generally prevent delirium. Whisky is efficacious, especially in alcoholic patients. Hypnotics are frequently given by rectum in very delirious patients. Nausea and vomiting are relieved by milk modified with cerium oxalate, grs. v, and sodium bicarbonate, grs. x, to milk 3 viij. Distension is treated by turpentine stupes, rectal tube, and turpentine by mouth, ℥ v-x, or enemata. Whisky and digitalis are used as heart stimulants as indicated. If hemorrhage appears, the patient is kept quiet, cold is applied to abdomen, saline enemata given to replace the blood lost, or saline infusions are used. Milk forms the diet during the course of the disease, but kumyss, broths, and beef-juice are frequently given. As soon as the temperature reaches normal the diet is rapidly increased. As little medication as possible is given during the course and convalescence.—*Medical News.*

A REVIEW OF RECENT STUDIES ON THE NATURE AND ORIGIN OF CANCER.—J. Collins Warren, of Boston, in the Boston Medical and Surgical Journal, calls attention to the geographical distribution of cancer. It appears to be almost unknown in the far north and is exceedingly rare in the tropics. It abounds in Middle and Southern Europe, Great Britain, the United States, and Australia. It is also found in China and Japan; Egypt, Abyssinia, Western and Central Africa, and Brazil are almost exempt. It is worth noting that malaria and cancer are said to be in inverse ratio to each other. D'Arcy Power describes a flat country in England with a population of 12,000, in which from 1872 to 1898 there were 173 cases of cancer. There seem also to be cancer streets and cancer houses, and solitude

appears to favor its development. General opinion holds that there has been a marked increase of the disease in the past fifty years. Haviland's studies show that there has been an enormous increase in Great Britain. In this country the greatest increase occurred in San Francisco. The endemic character of cancer, the steady increase and sudden invasion of localities suggest strongly a local cause. Behla, Bencke, and Paget have tried to show a relation between cancer and impure food or water. The xylomata or wood tumors of trees are known to be contagious, and there are cases recorded in literature of cancer being communicated from one person to another. Imitation and heredity play some part. The question as to specific organism, like Sanfelice's *saccharomyces neoformans*, is still unsettled. Roswell Park's laboratory at Buffalo for the study of cancer, endowed by the State of New York, is the first instance of the kind in any country.—*St. Louis Medical Review*.

INDICATIONS FOR CESAREAN SECTION.—Professor Treub, of Amsterdam (*Aerztliche Rundschau*), first refers to the fact that he had performed this operation five times within the previous three months. The indications were varied, and it would not be right for him to state that he was forced to perform this operation in each case.

The first patient had an osteoma of the left ischium, which had already necessitated a prior Cesarean. Median longitudinal incision; delivery of living child and recovery of mother. Operation chosen by patient and performed at term after pains had set in.

Second patient, fourth pregnancy. Pendulous abdomen; transverse position of fetus. Stenosis of vagina dating from previous dystocic labors and operations for relief of condition. Rupture of uterus feared. Successful Cesarean; mother and child both safe.

Both the foregoing were indications of necessity.

Third case. History of three stillbirths; patient already two days in labor; cervix as yet closed. Successful Cesarean operation. Child required reanimation; mother safe. Cause of dystocia found to be a rachitic pelvis. True conjugate $9\frac{1}{4}$ cm.

Fourth case. Generally contracted, rachitic pelvis. Conjugate $9\frac{1}{2}$ cm. Child could not be expelled by the normal route. Cesarean operation safe for mother and child.

The fifth and last case was of the same nature as the two preceding, and was likewise doubly successful. Treub makes some interesting comments. Leopold's law for the insertion of the placenta held good in all but one case.—*Obstetrics*.

DIAGNOSIS AND TREATMENT OF TUBERCULOSIS OF BONES AND JOINTS.—Dr. De F. Willard (*International Medical Magazine*) says that it is necessary to emphasize that rheumatism in a single joint in a child never exists without positive indications of fever. Of the symptoms of tubercular inva-

sion of a joint, muscular rigidity is the most reliable sign, and usually one of the earliest symptoms. A careful examination is necessary in all cases.

Children of tubercular parents are predisposed to tubercular disease, but an absolutely healthy child may, under the influence of a traumatism, have a joint tuberculosis. There can be but one rational line of treatment:

1. To fortify the entire resistive powers of the individual so that the assault of the bacilli may be successfully repulsed, limited, and ultimately cast out as debris or successfully encapsulated.

2. To assist these powers by rest and mechanical measures, having for their view the prevention of added inflammatory action, which may give mixed infection and lead to suppuration.

3. The removal of the diseased focus or of its products, as necessity arises.—*Pediatrics.*

EXPULSION OF GALL-STONES BY THE USE OF SULPHUR WATER.—Dr. Axel Winckler reports an instance of the expulsion of fifteen stones after the use of twelve ounces of sulphur water (Bad Neundorf), aided by sulphur baths. The explanation is that sulphur water increases the secretion of the bile. Neundorf water contains 4.5 per cent of hydrogen sulphide, and in that respect is the strongest sulphur water in Europe. After the expulsion of the stones the use of the water should be persisted in, so that the bile may be kept fluid.

In this connection attention is called to the fact that extensive use of eggs may readily be the cause of the condition, and a cause frequently overlooked. The yolk contains cholesterin in the amount of one-half of one per cent, while gall-stones are nearly eight per cent cholesterin. Bread and the seeds of cereals contain this substance also, and should be limited in quantity.—*Therapeutische Monatshefte.*

TREATMENT OF INFANTILE ECZEMA.—In the squamous or the milder grades of papular or vesicular eczema of children, L. Leistikow (*Monatshft. f. prak Dermatolog.*, September 1, 1900) recommends the use of a zinc-oxide paste containing one to two per cent of yellow oxide of mercury. In eczema rubrum or crustosum nothing seems to act so well as a plaster mull with zinc oxide and ichthyol. It is only in the most obstinate cases that this treatment fails, when resort must be had to pyrogallie acid, which never disappoints. It is best applied incorporated in casein ointment, and, if not used stronger than two per cent, no ill effects will ensue.—*Medical News.*

OCULAR HEADACHES.—W. A. Brailey (British Medical Journal), discussing ocular headaches, says muscular errors, especially the accommodative movements, are by far the most important; other influences are glare and sudden changes in the amount of light. Defects in accommodative movements are responsible for most of the ocular headaches. Errors of the extrinsic muscles produce headache, but less so than do the accommodative muscles, though more migraine, more dizziness, and more general

distress. It is a general law that the greater the amount of ocular error, the less tending to headache. Both spasm and headache are produced more by moderate amounts of errors of refraction, especially if it be astigmatism, and most of all if it be astigmatism with asymmetry of the axes.—*St. Louis Courier of Medicine.*

TREATMENT OF VARICOSE ULCERS.—Bardescu, "A New Method of Treating Varicose Ulcers of the Leg" (*Centralblatt für Chirurgie*). The author reports two cases of chronic indolent and indurated ulcer of the leg which were cured by section of the internal saphenous vein and the stretching of the perineal nerve. Local anesthesia resulted in the area supplied by the nerve, which was followed by absorption of the induration and a healthy ulcer, even by firm scar tissue.

A case with ulcers on both legs, which had resisted other methods of treatment for some years, became cicatrized in twenty-seven days from the above method of treatment. The portion of nerve stretched is dependent upon the site of ulceration.—*Montreal Medical Journal.*

DIFFERENTIAL DIAGNOSIS BETWEEN TYPHOID FEVER AND APPENDICITIS.—S. Weiss, of Vienna, in a communication read at the recent meeting of the American Medical Association (*Medical Record*), states that if a drop of blood taken from the lobe of the ear be treated with iodine, the red corpuscle in health becomes yellow and the white cells are unaffected. In disease, however, the multinuclear cells are stained, while the eosinophiles are unaffected. This reaction always shows the presence of pus. Cases of appendicitis and perityphlitis could therefore be differentiated by means of this reaction from typhoid fever.—*American Journal Medical Sciences.*

CONCERNING MILK STERILIZATION.—Winter (*Yahrb f. Kinderheilkunde*, May, 1900) relates the result of his experiments made to determine the efficiency of the various methods of sterilization. Fractional sterilization has no advantage over continuous sterilization, and is too elaborate for ordinary practice. The exposure to heat must in no case be too prolonged, as caramel is formed when the milk is heated for a long time. The author proposes that milk be heated from 101° to 102° C. for from twenty to thirty minutes as the best means for ordinary sterilization. If such a milk is kept on ice it will remain sterile. There is no way of permanently and completely sterilizing milk. The most resistant germ is the bacillus mesentericus.—*St. Louis Courier of Medicine.*

THE CARE OF THE HAIR.—In serious illness the physician should vigorously oppose cutting off the hair, particularly in women, as the advantages are slight and the risk of unpleasant consequences great. The hair should be combed and brushed daily, unmindful of the amount of hair falling out, and once in two to four weeks the hair should be washed with the ordinary tincture of green soap. Once or twice a week it is well to rub into the scalp a pomade of precipitated sulphur of the strength of one drachm to the ounce of cold cream.—*Medical News.*

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

EMPHYEMA OF THE ANTRUM OF HIGHMORE.*

BY M. F. COOMES, A. M., M. D.

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Abscess of the antrum of Highmore is most frequently produced by the roots of the teeth which project up into the cavity. Abscesses in this locality may result from a growth of any kind that exists in the cavity, and may also be produced by disease extending from the nose into this space. The thing that concerns the practitioner and surgeon most is the general management of such cases. Many ways have been suggested as to the manner of draining this cavity, which is the desideratum, and, in fact, necessary to effect a cure. One class of surgeons propose to make an opening through the alveolus and insert a drainage-tube. This sounds very well, and works well for a while, inasmuch as it satisfies the patient, because the cavity can be cleaned every day with little or no trouble. I say cleaned; this term should be modified, because where drainage-tubes are inserted it is absolutely impossible to keep the cavity thoroughly cleaned, for the reason that if it projects above the floor of the antrum it will not drain the cavity as it should. If it does not reach the level of the floor of the antrum, and even if it should reach to the level of the floor, gran-

* Read before the Kentucky State Medical Society, May, 1901.

ulations will sooner or later close the tube, and you have the same conditions as if the cavity were closed from any other cause. Further, it should be remembered that the floor of an antrum is not so constructed as to be able to drain it from any particular point. It has been demonstrated by actual dissection that the floor of almost every antrum is more or less irregular, and in many instances divided into two or more compartments by bony partitions springing up from the floor and extending from side to side. Again, the floor is rarely level; in fact, it is nearly always inclined to one side or the other, or it may have a very decided depression in its center. Any one of these conditions will, of necessity, make it difficult to thoroughly drain the cavity.

With these anatomical facts before us in connection with the cavity of the antrum, it is quite clear that the manner of draining this space is not the same in all cases. For instance, suppose that the floor of the antrum should be divided into two equal compartments by a partition extending from one side to the other, an opening made into one of these compartments would result in simply draining that compartment, while the other would be left in a foul condition; hence it will be seen that although an opening is made into the floor of the antrum, it may not result in enabling us to thoroughly cleanse the cavity. Before going further it is well to consider the locality at which the antrum is to be entered. If the patient should have a full set of teeth, in good order, it is very desirable to retain them, hence the canine fossa would probably be the most desirable place to enter the antrum. If this position is not desirable for any cause, it will be left to the surgeon's judgment as to what point it is better to enter the cavity.

As many as 70 per cent of all cases of abscesses of the antrum are due to carious teeth. In the great majority of instances we are warranted in removing the diseased teeth or tooth and entering the antral cavity through the channel occupied by the tooth. Just here I wish to state that the great fault with many surgeons is that they fail to make the opening sufficiently large. I am sure that I have been guilty of this in my earlier professional life, but of late years the necessity of thorough drainage has been so impressed upon me that I have invariably made larger openings into the antrum, quite large enough to insert the largest size eustachian catheter. I have frequently had dentists to make this opening by using a dental engine, and one of the difficulties I have met with is to get them to use a burr sufficiently large to admit of thorough drainage.

Kyle, one of the modern, up-to-date surgeons, in his recent work on this subject advises making an opening large enough to admit of packing the cavity with gauze, and in this way drain the cavity. I am sure he is quite correct in this, as his statements are borne out by clinical facts, and those who have practiced his methods and witnessed the failure of other methods can bear testimony to the good results thus attained. Kyle says that "as to the question of a drainage-tube in the antrum from below, my own experience has been that not one that I have used is entirely satisfactory." I am sure he is correct in this particular. Sometimes cases do get well where the tube is used, but it must be remembered that in some of these cases the cure is spontaneous; that nature provides a remedy, and the diseased condition passes away after a certain period. No doubt nature has provided a means of drainage through the nasal cavity in these cases, and just here I may say that very many cases of ozena are the result of abscesses in the antral cavity, the pus from that cavity flowing into the nose and giving rise to the unpleasant odor. It is very natural that this cavity, when once infected, would be slow to recover, the chief reason being that its interior is a secreting surface, and other accessory cavities pour their secretions, either directly or indirectly, into this cavity. Further, it must be remembered that this cavity is kept at a high temperature, the temperature which is sufficient to produce decomposition of the secretions that are in the cavity. To recapitulate, the main difficulties to contend with in effecting a cure of empyema of the antrum of Highmore is the difficulty of effecting and maintaining thorough drainage, and the readiness with which the secretions become decomposed in this cavity, and the difficulty of thoroughly washing out the cavity.

To overcome these difficulties, free drainage of the cavity by making an opening sufficiently large to permit of thorough cleansing, and the application of such medicated agents as will best suppress and eradicate the disease, for this is the object that is desirable to accomplish in all cases. The use of drainage-tube is the equivalent of admitting that such cases are incurable, and I believe that it is not the desire of any patient so afflicted to maintain a constant nuisance, which they are sure to do if they retain the tube leading into the antrum.

LOUISVILLE.

**THE LONGEVITY OF PEOPLE OF SEVENTY YEARS AND OVER
LIVING IN THE VALLEY BELOW THE CITY OF LOUIS-
VILLE, CALLED THE PONDS SETTLEMENT,
WITHIN THE LAST HALF-CENTURY.***

BY T. B. GREENLEY, M. D.

The writer commenced the practice of medicine in this valley in the year 1845, and can state pretty clearly the character of the diseases prevailing at that time and since that period. Malaria might be said to be the prevailing trouble for many years; especially was this the case during the later summer and fall months. The most sickly year during my practice was 1846. During that year scarcely a family escaped either intermittent or remittent fever, and I attended twelve cases of pernicious or congestive intermittent fever. In those days people expected to be sick in the fall, and many prepared for it.

My object in writing this paper is to show, notwithstanding the intense malarial character of the locality, more people lived to be over seventy years than perhaps any district of the State of the same extent and number of population. The valley, in those days, was called the Ponds Settlement, which it still retains. This appellation was very appropriate, as there were many ponds, some of which covered as much as fifty acres of ground. In fact, sixty years ago there existed in the city of Louisville ponds of considerable size on several of the most popular streets, and in those days the city was troubled a great deal with malarial diseases.

Fortunately, in time the ponds were properly drained or filled up, and Louisville is now among the healthiest cities of the Union. Our old Ponds Settlement is also very well drained, which has also become quite as healthy as other localities. We have now comparatively but little malarial disease, which is of mild character.

Fifty years ago there was but little if any malarial disease in the bluegrass section of the State, but consumption and typhoid fever were common, and, of course, to a great extent fatal in character. While that section of the State suffered from those fatal diseases, the Ponds Settlement, though the most malarious district in the State, suffered mainly from diseases due to that cause, which we could relieve. Of course we had some typhoid disease, but not to so great an extent as

* Read before the Kentucky State Medical Society, May, 1901.

the highlands. It was a rare thing to meet with a case of consumption which originated in the valley. The large majority of cases of that disease which have come under my observation during the last fifty-six years came from the highlands.

From these remarks one might conclude that malaria is possibly a prophylactic against consumption. This may or may not be the case, but it seems to look that way. Fifty years ago what is termed the Ponds Settlement was very sparsely populated, but since the ponds have been drained and the health improved it is now reasonably thickly populated by an agricultural community, at least double that of fifty years ago. The section of country I speak of contains about fifty square miles, and numbers about five thousand people.

I have collected the names of eight hundred and twenty-five people who have lived in this district and attained the age of seventy years and over within the last fifty years. Their aggregate ages amount to 63,443 years, which gives an average of 77 years to each individual. The oldest person was 105, and several well up in the nineties, and one 100 years old.

I feel confident I have failed to obtain a good many names of old people who have lived and died within the district in that time, as there are several localities I have failed to meet parties familiar with the names of old-time people. There is but little doubt that at least one thousand people were within this period seventy years old and over at the time of their death, including those now living who are past three score and ten.

Therefore I maintain that as to old people over seventy years, no other district of the same extent and number of population in the State can show as long a list of old people in the same period of time. There are only about twenty-five colored folks included in the foregoing number of old people. A great many of these old people are still living.

There has been effected a great change for the better in the treatment of malarial diseases within the last fifty-odd years. When I commenced the practice of medicine, remittent fever was quite fatal, owing to the manner in which it was treated.

The first thing the doctor did on visiting a patient with this fever was to bleed him pretty freely, then vomit him, next purge him, and nearly starve him until the fever was reduced sufficiently low, in his estimation, to give quinine; and unfortunately by this time the patient

was at the margin of the grave, and often fell in before quinine got him away. No difference how much fever existed, patients were not allowed to have cold water. What water they had was to be warmed by holding a piece of light-bread, the size of two fingers, in the blaze until it was scorched black, and while hot dipped in a glass of water to warm it sufficiently. This treatment to the mind of the common thinker is contrary to common sense.

My idea is, that if quinine is good for fever, it is good for it when on as well as off. It has always been my practice to give quinine freely in malarial fever, first, if necessary, relaxing the bowels; also to let the patient have as much cold water as he wants.

I recollect of losing but one patient with remittent fever; that was a colored man with the congestive form in that terribly sickly year 1846.

In speaking of old age, you now and then hear a person say that he does not want to live to be old, but those so talking are usually young people and have an idea that old people can not enjoy life; but we old people who are in good health can assure them that if they live to be old and can take a retrospective view of their past lives, and that second self, their Ego, called conscience, says "all's well," they can, at the age of three score and ten, the time allotted to man during the time of the wise king, enjoy life as well as when young.

MEADOW LAWN, KY.

SURGICAL TREATMENT OF INGUINAL HERNIA.*

BY J. T. DUNN, M. D.

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The results of recently devised operations for the cure of inguinal hernia have been so remarkable that I do not hesitate to hold up before you the present compared with the past.

This once hazardous operation is no longer considered so. Czerny's method, devised in 1877, and practiced throughout the surgical world until 1890, gave a mortality of 11 $\frac{5}{8}$ per cent, with from 30 to 40 per cent of relapses. This high mortality and per cent of relapses led up to the present method of performing herniotomy, and the results have been most gratifying, to wit, ten thousand cases, excluding strangulated

* Read before the Kentucky State Medical Society, May, 1901.

cases, operated upon from 1886 to 1897, show a mortality of nine tenths of one per cent.

In 1895 Bassini reported five hundred and sixty successive operations by the method which bears his name, without a single death. Marcy did over two hundred without a death; Macewen, eighty-one without a death; and Coley, two hundred with but one death, and that was by ether-pneumonia on the eighth day. Here are one thousand and forty-one radical-cure operations with but one death.

As to relapses, Bassini had operated upon fifty-four cases, forty-one of which had been traced from two to nine years when his paper was written, and not a single relapse had occurred. Later he reported 560 cases with 15 relapses (less than 3 per cent); Halsted, 180 cases with 3 relapses (1.6 per cent); Marcy, 133 cases with 6 relapses (4.5 per cent); Coley, 160 cases with no relapses. Here, then, are 1,033 cases operated upon with only 24 relapses, or only 2.3 per cent.

You may say these cases have not run long enough to determine fully the results. Perhaps so, but a study of the following cases of relapses will be of interest in deciding this point: Three hundred and sixty cases of relapsed herniæ following various methods of operating show 80 per cent to have occurred during the first year after operation, and of this number 64 per cent occurred during the first six months, and only 11.9 per cent occurred after a period of two years had lapsed. Of the cases that relapsed after two years, five occurred between ten and twenty-two years after operation, seven between five and ten years. In one hundred out of three hundred and sixty cases of relapse the operation was done for "strangulation." (International Text-book of Surgery, page 498, Vol. II.)

From this report we are apparently justified in concluding that if a case does not relapse within one year, chances are strongly in favor of it not doing so; and if it remains well for two years, chances are exceedingly small for relapse to occur.

It is estimated that fully 95 per cent of cases operated upon by Bassini's method will be followed by cure. In this connection it is interesting to note the most prominent causes of relapse. Chief of all is lack of primary and permanent union. In all hernia operations perfect primary union is of utmost importance. This depends largely upon two factors: First, cleanliness; and second, the use of suitable suture material. To be sure, trauma inflicted during process of operation plays an important part in defeating primary union.

That statistics show that a non-absorbable suture or ligature material should not be used in this operation is clearly set forth in the fact that in the Hospital for Ruptured and Crippled in seven years there have been twenty-six relapses, and in all of these, silk, silver wire, or silkworm gut were used. Again, the use of absorbable material too small to remain in position sufficiently long for union to take place defeats primary union by allowing the wound to reopen, and it must heal by granulation. Absorbable material which is too heavy frequently will not be absorbed, but becomes a foreign body and is cast off by supuration.

Indications and Contra-indications to Radical Cure. Childhood and youth give best results with lowest mortality. Coley has operated upon four hundred and fifty children with but one death and three relapses. As a rule, children should wear a truss first a sufficient length of time to determine the impossibility of effecting a cure by this means before advising an operation. Children under four years have been operated upon. I assisted in an operation (Bassini's) upon a child about one year old, resulting in perfect recovery. It should be kept in mind by both practitioner and surgeon that about two thirds of rupture in children are cured by the truss; the other one third goes on to adult life with rupture. Children with irreducible omentum, or with reducible hydrocele, should be operated upon.

Adults under fifty years of age should be operated upon, provided the health is good and the hernia is not too large and irreducible, under which latter condition the risk is considerably increased by virtue of old adhesions blending the contents with the sac. Adherent irreducible omental herniæ in middle life are best treated by operation.

Methods of Operating. The methods introduced and lauded by their originators in the past few years are too numerous to mention here. The methods most worthy of note, the methods which have given such excellent results, are Bassini's and Halsted's.

Bassini's method was published in 1888, but was devised in 1885. It consists of a new principle entirely, namely, transplantation of the cord. This method has given remarkable results, and is now the favorite in the surgical world. After exposing the external abdominal ring with its contents (the sac and cord), a director is passed through the inguinal canal to the internal abdominal ring. In this position it has superficial to it only the aponeurosis of the external oblique, which is now divided with the knife or scissors up to the internal ring, thus

exposing to view the entire length of the inguinal canal, with cord and sac, *en masse*, lying upon its floor. At this stage of the operation, to avoid confusion and delay when suturing the canal, it is essential to catch with forceps the free edges of the aponeurosis thus divided, and strip or dissect them up with the finger. The upper edge should be freed as high as one and a half inches, and the lower edge down to the deep shelving of Poupart's ligament. I always leave these forceps in position, and find that they not only serve to render it less difficult to locate these structures, but enables your assistant to keep the aponeurosis out of your way while applying the deep set of sutures. The next step is to isolate the sac and cord. This is best done with the thumb and fingers.

I prefer to make the start at the external ring if possible, and, after passing my finger between the cord and sac, it is usually easy to separate them by enlarging the opening occupied by my finger, gently teasing my way to the tip of the sac and likewise to the internal ring above, where it broadens out to form the parietal peritoneum.

The introduction of asepsis in surgery has allayed the fear formerly recognized in opening the sac, and now this may be done with impunity, as we have little or no fears of peritonitis. The profession is about united upon the question of opening the sac. It should be opened in all cases. This permits inspection and reduction of gut or omentum, or enables you to ligate and remove large pieces of omentum if necessary, and to anchor the gut in close proximity to the opening if necrotic.

The contents treated as indications require, the sac is now ligated by an assistant over the end of the index finger of the surgeon, which is introduced into the sac as high as the internal ring. This precaution absolutely prevents the possibility of including a portion of gut or omentum in the ligature. Twisting the sac with forceps attached to its apex, after careful inspection, is a method frequently employed by surgeons. The distal end is now removed, and the first or deep set of sutures are now to be applied.

We proceed to this step of the operation by lifting the cord well out of the way by a strip of iodoform gauze in the hand of an assistant, until the line of suturing is complete. This usually requires five or six interrupted sutures, and should be of absorbable material, preferably kangaroo tendon. These sutures include the internal oblique transversalis muscle, the transversalis fascia, sometimes the rectus on the

upper side, and are sewed over to the deep shelving of Poupart's ligament on the lower side. The relation of the large femoral vessels must not be overlooked in this step of the operation. The cord is now placed upon its new bed, and the cut edge of the aponeurosis of the external oblique on the upper side is sewed over to the aponeurosis on the lower side. Kangaroo tendon or catgut should be used here, and the suture either continuous or interrupted. Due care should be taken, of course, not to constrict the cord at either its new internal or external opening. The skin incision should be closed without drainage. In Bassini's original paper he advocated the use of silk for these buried sutures, but since 1892 he has employed chromicized catgut.

Halsted's method is very much like Bassini's, yet in several essential points differs very materially. The results obtained by Halsted's method by surgeons in general do not compare favorably with those obtained by the same men doing Bassini's operation. The differences between Halsted's and Bassini's method are as follows: First, in Halsted's method the internal oblique muscle is freely divided beyond the internal abdominal ring, while in Bassini's method only the aponeurosis of the external oblique is cut. Second, in Halsted's method all the veins of the cord, save two or three, are removed, while Bassini's method does not disturb the constituents of the cord. These differences, carefully weighed and tested by surgeons in general, have caused them to prefer Bassini's method.

O'Connor has recently reported one hundred and twenty-nine cases operated upon by Halsted's method, with atrophy of the testicle following in 20 per cent of the cases. This alone would make Bassini's operation the superior method.

Halsted's method, in brief, is as follows: After exposing the external abdominal ring, the aponeurosis of the external oblique, internal oblique, and transversalis muscle and fascia are cut through from the external abdominal ring to a point three quarters of an inch external to the internal abdominal ring. The vas and blood-vessels are isolated, and all but one or two veins removed. The sac is isolated, ligated, and excised. The aponeurosis of the external oblique, internal oblique, transversalis muscle, and transversalis fascia on one side and the transversalis fascia, Poupart's ligament, and aponeurosis of external oblique upon the other side are brought together with six or eight deep Halsted's mattress sutures (beneath the cord). The cord is now placed upon its new bed and covered by closing the skin incision without drainage.

Choice of Methods. That method should be selected, other things being equal, which is the least complicated. At present Bassini's method is distinctly the simplest, and the evidence is strongly in its favor. Halsted's method is more complicated, and the results obtained by Halsted himself do not equal those obtained by Bassini's method in the hands of other surgeons. Kocher's, Macewen's, and other methods, not removing the sac after ligation, are considered inferior, and do not meet the requirements conducive to permanent cure.

With primary union patients should be out of bed in ten to fourteen days, and a well-applied spica bandage will enable them to be out in a few days more.

To sum up, in conclusion, we learn, first, that mortality has been reduced in the last few years from 11½ per cent to less than 1 per cent; second, that relapses have been reduced from 40 or 50 per cent to about 3 per cent; third, that primary union should be the chief aim, and usually occurs when absorbable suture material is used. (Coley buried kangaroo tendon one hundred and eighty times, and secured primary union in one hundred and seventy-four of them.)

LOUISVILLE.

CLASS VALEDICTORY ADDRESS.*

BY H. E. HUTSON, M. D.

Four years ago a number of men from various States in the Union decided to break loose from the ordinary routine of life and launch their barks in a sea of science, the depths of which have never been sounded.

The class of men whom I confront to-day, skilled in medical science and the science of surgery, then represented a score of professions from all parts of the United States, from the reticent farmer to the blatant demagogue. Though there may have been its equal, never, I think, could there have been a greater diversity of characters and personalities than was at that time collected in this class of 1901.

Here came the Texas ranger and the Oklahoma cowboy; the Kentucky corn-crackers and the Missouri free-soilers; the Louisiana cotton-heads and the Minnesota bear-eaters; the Washington hop-pickers and the New York bond-recorders; the West Virginia oil-

* At commencement exercises of Kentucky School of Medicine, June, 1901.

drillers and the Pennsylvania coal-diggers; the Ohio mud-mixers and the Indiana Hoosiers; the Alabama fox-chasers and the Arkansas travelers—all with one accord and the same intent, to assemble and re-assemble in the various laboratories of the Kentucky School of Medicine and sip from her shrine of medicinal intellectuality, and though I live a thousand years the memory of those days will ever be green. Since then our experiences have been many and varied. For trials, troubles, misfortunes, and cool treatment the ice-man "ain't" in it.

Never, since we used to hunt for the cows bare-footed through rye-stubble and briar-thicket, have we had so many nerve-endings touched at the same time as in the seats of those amphitheaters.

The required quietude, considering the youthful members of the class, was something appalling—for I don't suppose there was one in the class over fifty years—yet in spite of all this we were expected to sit and listen with the same attentive minds that older persons would. But with all the ills and dissatisfactions, misunderstandings and reverses of fortune, our buoyant hopes cut short and again reinstated, and our blooming promises congealed by some cold wind of opposition, our stay here has been a fairly happy one.

Side by side we have sat in those time-worn seats, and alike drank in the fullness of our capacity from the copious cup of science. Then some of the boys have found the fevered condition of their intellectual stomachs so intense that a draught from the cup failed to quench the burning thirst, and likewise have found relief in other drinks.

Night after night have these same faithful students burned the midnight oil—because they failed to get back to their rooms in time to put out the lamp before.

Though some have been wayward, none have been dissipated, and the class that shall disperse to-day toward all quarters of the nation is one that shall ever reflect credit on the school and faculty, whose untiring efforts have moulded them into mature physicians and surgeons.

The same lessons have taxed our every brain; the same intangible problems have alike tripped our understanding, and the same prospects have stirred our anxious hopes as we gaze through the dim and hazy future.

And to-day, on the verge of our departure, we stand as one united band. Though our destinies may be in various localities, that oneness of heart and interest and experience will cling to us still.

We are one, not as a tribe, not as a people, not as an assembly, not

as a clan or creed, or school, or order, or profession, but what is more forcible than all, one as a class. Creeds will never cease, but we surely shall; orders can live forever, but we can not; our profession will never end, but the days of our class are numbered by the Divine that has made us. When one of their number may cease to live, the vacancy is supplied by a score of applicants; but when the fleet-winged angel of death overtakes us in our career, and with his keen scythe of time trims from our band but one, even though he may be the most unworthy one, a link is gone, the chain is then broken, never, never to again be reunited.

No raw recruits can be marshalled into our ranks to supply the deficit; no new companies can be filed into our lines to fight the fights of our regiment, but when one is gone, the class of 1901 is broken forever. We are one and inseparable, bound by ties that intervening forces can never divide, and whose indelible record, whatever that record may be, the erosion of time nor the lapse of ages can never erase.

However, the waning of this day closes the final scene of our preparatory act. To-morrow morning's sun dawns upon another epoch of our lives. Our shouts and cheers have been heard through those old halls for the last time, and the scenes that now know us will shortly live in memory's book of dreams.

Other forms will be seen clustering in the corridors and exchanging confidences, new faces will confront the lecturers in their daily talks, strange voices will give the welcoming cheer. Regardless of the stupidity of any one's affections, the coldest hearted and most phlegmatic can but feel a slight tinge of grief at the thoughts of our eternal separation. But when the pleasant hours of our school days have been folded with the manuscripts of forgotten lore, and we leave behind us these old walls which have, for years gone by, smiled and frowned upon the efforts of the thousands gone on before us, when we begin to strive with the brawny arm of fate, and when fortune seems to bear down upon us and raise up barriers in our pathway, there will be series of sorrows mingled with incurable regret, in that we have left out so much technique that our worthy and faithful tutors have tried to give us.

No one has improved all his time; some more than others; but be it as it is, leaving behind us our past, we are now ready to go, and in going we must not measure our lives by the tranquillity of our own

minds, but by the amount of pain we can obliterate and the amount of human life we can preserve; for in that and that alone shall be our mortal achievements.

We can not hope for a cloudless horizon surrounding a chimerical panorama of shimmering lawns and luxurious growths, moistened by heaven's sweetest dews and made fragrant by the arborescent laburnum and beautified by the trailing cypress and blowing rose, where nocturnal shades and sunlit sheen sleep in turn upon the sward.

Nor can we hope phantom-like to drift with the tide of pleasure's stream, whose silvery waters roll o'er golden sands and brush the banks of unchanging beauty, o'er whose placid bosom nature's sweetest censors are borne on zephyrs' balmy wings, and on whom an azure dome forever smiles.

Such soliloquy is like Hood's musings, when he says:

"I've heard about a land
Where omelets grow on trees;
And roasted pigs run crying out,
'Come, eat me if you please.'
But how shall I get there?
Straight down the crooked lane,
And all around the square."

The little world of our usefulness will consist of various vicissitudes darkened and brightened by efforts and effects.

We shall ever have to oppose Nature's reverses, invade fields saturated with bacteria and overrun with malignant germs, where cruel disease is arrayed against our every maneuver; where darkness of death seems brooding in every shadow and its warning voice in every breeze.

The one thing redeemable about the profession is that there is one old lady in every municipality who sends for the doctor when she is not sick; thus he gets to brush up against a real well person, and likewise converse with one who is interested in his profession, and one well versed in materia medica, panaceas, patent medicines—from Mrs. Pinckham's Compound down to the Hodo Corn Salve—home decoctions and neighborly compounds thrown in. She herself has taken pills till every joint has become one of ball-bearing, and so thoroughly lubricated her vocal apparatus with oils, emulsions, and animal extracts until it is capable of achieving any kind of colloquial feats.

The intrinsic and extrinsic muscles of her tongue are so completely oiled that she can wriggle into medical phrases Tyson never heard of,

and words that Adam could not define; in one breath can tell a dozen known symptoms of toothache and a cure for influenza. But even in response to their whims and biased ideas we owe no harshness; on the other hand, the lives we live and the deeds we do before the world must be of kindness and gentility.

It has been said: "Every tender word we speak, every blessing we bestow, is a thread of sunshine woven into somebody's life. All the smiles and sympathies which come to us from other lips and other hearts are threads of love and light woven into our own. But let the loom of love for a moment stop; let its blissful shuttles cease to fly, and that moment happiness will lie dead on the hearthstone, and laughter and song will perish among the roses at the door."

And more especially can this be applied to the physician, whose function it is to soothe the sick, to soften the dying bed, and comfort and console the bereft in their darkened hour of deepest mortal anguish. These are duties of our choosing; we all know what we have before us, and I think in knowing we are prepared for them.

It is enough for most men to be good, honorable citizens; with us it is not so. We have chosen a profession and prepared ourselves to begin it. We have every thing in our favor—competence, energy, and industry—and above all, we are Americans!

We have a mighty stage, on which it is true we can not establish a footing without merit and without labor, in which resolute rivals will urge us on to emulation. So much the better; then competition will tax our keenest powers. It is a glorious fate to have an influence on the vast but ever-growing mind of such a country; to think when we have retired from the busy scene that we have played an unforgotten part; that we have been mediums under God's great will, ameliorating the suffering of humanity. This is true ambition. The desire of personal notoriety is vanity, and not ambition. We can not afford to be indifferent as to our progress, nor can we hope that an active career will be a path strewn with roses.

At present we have no enemies, but the moment we attempt distinction we will be abused, calumniated, and reviled. We will be shocked at the anger we excite, and sigh for obscurity, and decide, as Franklin has said, "We have paid too dear for our whistle." But in return for individual enemies it is a grand recompense to have the public itself our friend, and perhaps prosperity our familiar. Besides, there is a conscience of the head as well as the heart, and when the

days of our usefulness are over, with brightened reflections we look back over our active career, and, without regret, remorse, or shame commit ourselves to the inactivity of age—to that age when we most sensitively enjoy the mere sense of existence—when the face of nature and the passive convictions of benevolence of our Great Father suffice to create a serene and ineffable happiness, which rarely visits us until we have done with the passions; till memories, if more alive than heretofore, are mellowed in the hues of time, and faith softened into harmony all the asperities and harshness; till nothing remains to cast a shadow over the things without.

Then on the verge of life the angels are nearer to us than before. Hearts that we have made happy will appear in our visions to bless us; the fruits of our efforts will console us in the thought that our labor has not been in vain nor ends with our lives, for "the good men do lives after them."

Dear professors, four years ago we came here a collection of crude material, and submitted ourselves to your care and your instructions. You received us in our unformed state, and, like the potter his clay, you have molded us into shapely and useful vessels. You have given us a higher sphere in life; you have enlarged our capacity for good. You have taught us, you have encouraged us, you have given us a helping hand over many a slough and urged us on to greater adventures, for all of which we to-day owe you a lifetime of gratitude, a debt for which money can not compensate.

Dear classmates, the time has come when our separation is to be final. Duty's call bids us away. We are no longer under the care of older and wiser heads; no longer can we refer our mistakes and shortcomings to men who love to attend us. But alone we must stand, and alone we must walk. How nicely Robert Burns pictures our case when he writes to his young friend who was just about to graduate:

"Ye'll try the world soon, my lad,
And Andrew, dear, believe me,
Ye'll find mankind an unco squad,
And muckle they may grieve ye!
For care and trouble set your thought,
Ev'n when your end's attained;
And a' your views may come to naught,
When ev'ry nerve is strained."

NINA, W. VA.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, June 28, 1901, the President, T. L. Butler, M. D., in the Chair.

Removal of Bursa: Operation for Dermoid Cyst. Dr. W. O. Roberts: The first specimen is a bursa that I removed a short time ago from just below the patella. The patient was about thirty years of age, a very large, fleshy man, who was the subject of infantile paralysis. He was a storekeeper, and told me that he was in the habit, in waiting on customers, of putting his knee against the counter to assist in raising himself. This bursa had been in existence for twelve years. Last winter he was in the city and consulted a surgeon, who aspirated it, and told him if it refilled it would be necessary to have it taken out. He afterward fell into my hands, and I dissected the bursa out at the Sts. Mary and Elizabeth Hospital. I had to remove a considerable flap of skin in order to prevent any redundancy. He got well quickly, and left the hospital two weeks after the operation. This is the largest bursa I have ever seen, being fully as large as a good-sized orange.

Case 2. The next specimen came from a patient operated upon day before yesterday at the University of Louisville Hospital. The patient was a girl, eighteen years of age, who had been suffering for something over a year—she said thirteen or fourteen months—with pain in her right side, and for ten months she had noticed a tumor. This had grown quite rapidly in the last three months. She had menstruated regularly, and suffered very little pain during her menstrual periods. Upon examination I could see the outlines of a tumor distinctly; it felt and looked about the size of a pregnant uterus at five months. I thought, however, I could detect the uterus in front of the tumor.

I operated upon her day before yesterday and found this large tumor to be the left ovary; it was very adherent, but was finally removed without tapping. I also removed the right ovary, which was also cystic. After removal of this large tumor it was opened, and the contents found to look exactly like thick, creamy pus. I was surprised at that, and had the fluid examined carefully, but it was found not to have any pus in it. It was a fatty fluid, which made me believe that most likely it was a dermoid. This is the second dermoid cyst that I

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

have removed in the last six weeks. The first was a very large tumor, about the size of one presented some weeks ago by Professor Anderson, and contained bone, teeth, and hair.

Discussion. Dr. A. M. Cartledge: I indorse removal of the bursa. This is the best way to treat these cases of bursa about the patella. This is the largest one I have ever seen. The old plan of tapping, injecting with some preparation, pressure, etc., usually results in failure to do any good. Tapping might be practiced where the case is seen early, but should be tried only once. Carefully dissecting the bursa out is the only treatment to be recommended.

Dr. B. C. Frazier: I wish some of the older surgeons would say something about the tumor Dr. Roberts has shown. These tumors of the ovary, dermoid in character, that do not contain the ordinary dermoid contents, are very interesting to me, especially the variety Dr. Roberts speaks of, containing a gelatinous material which looks like pus but is not. I would like the pathologists and surgeons to enlighten me in regard to tumors of that class.

Dr. T. L. Butler: As Dr. Cartledge has stated, enucleation was the proper treatment for this bursa. I am at a loss to know what the other specimen is, unless it be a dermoid cyst.

Dr. Turner Anderson: I had the pleasure of seeing Dr. Roberts operate on the second case. The fluid contained in the cyst looked very much like liquid fat, and reminded me of the fluid found in the dermoid cyst which I removed not long ago, where there was a large dermoid on one side and a fibroid on the other, necessitating a hysterectomy as well.

Shot Wound of the Abdomen. Dr. W. O. Roberts: On the 30th of May I was called to Jeffersonville, Indiana, by Dr. Hancock to see a patient who had been shot in the abdomen. I reached the house about three o'clock. I found the patient to be a boy ten years of age, who had been shot at eleven o'clock, four hours before I saw him. He was about half a square from his home, and one of his playmates accidentally shot him at very close range with a Flobert rifle. The bullet had struck him just a little above and about three-quarters of an inch to the left of the umbilicus. He walked home, not thinking he was seriously injured, and not caring to let his parents know how he had been hurt, but on going into the room he felt faint and dropped into a rocking-chair, and his mother noticed blood on his shirt front. He then told

her how the accident occurred. He was put to bed immediately, and Doctors Hancock and Brewer were called in. The boy vomited after getting in bed. There was nothing unusual about the matter vomited, and he also passed his urine, which was clear.

When I reached him his pulse was 128, and his temperature was 98 F. He was lying on his back with his legs flexed, and his abdominal muscles were quite rigid, the rigidity being especially marked on the right side. He was tender all over his abdomen, but especially tender from the point of entrance of the bullet to the right side. We believed that the bullet had entered the cavity, and advised that he be taken to an infirmary immediately and the abdomen opened. The family declined to have him moved from the house, and no persuasion on our part would change their views. They were anxious, however, if we thought the case demanded it, to have the operation performed at home. This we did. I looked at my watch, and it was half-past three when the boy began to take chloroform. The abdomen was opened, and the track of the bullet was oblique, as we had suspected, going through the abdominal wall obliquely. Upon opening the cavity a considerable amount of bloody fluid escaped, and there was, I suppose, a handful of clots in the cavity. After these were thoroughly cleaned out, examination was made for wounds of the intestine, and I found a wound of the greater omentum and some bleeding still going on from two small vessels in the omentum. This was stopped by a ligature. Then upon further examination we discovered two wounds of the transverse colon and two wounds of the small intestine. In the region of these wounds the intestines were very deeply congested. The wounds of the intestine were closed with a double Lembert suture. The vessels of the omentum were ligated first. The cavity was then washed out with normal salt solution. Before closing the abdominal wound a piece of gauze covered with rubber tissue was introduced at the upper angle of the wound, going back to the back part of the lumbar region. The boy was put to bed. Before this was done his rectum was filled with normal salt solution. His pulse after he was placed in bed was about 140 to the minute.

I saw nothing more of him until after I returned from the St. Paul meeting of the American Medical Association, when I found that he had made an uninterrupted recovery.

Case 2. Two days before that I was called to Bardstown, Kentucky, to see a man who had been shot in a bar-room fight with a

Smith & Wesson pistol. The ball had entered on a line with the right nipple and just to the left of it. He was very tender in that region and in a corresponding place in the back. I thought I could detect a fracture of the rib behind. He was a very muscular fellow.

The shooting occurred on Saturday night, and I was there on Sunday night, twenty-four hours after receipt of the injury. He had a normal temperature, a pulse of 80. He had no difficulty in breathing, but there was some dullness in the lower part of the right side of the chest.

I advised that we put on an antiseptic gauze dressing and wait. I did not see him again until three weeks after the accident occurred. At that time I was told that he had been having a fever ranging from 100° in the morning to 102° F. in the evening for the previous four or five days. He was suffering a great deal of pain in the right side. He had never spat up any blood, and had had practically no cough; there was marked dullness on the right side extending up to the lower angle of the scapula. The wound had healed where the bullet had entered, and there was some puffing out at that point and a feeling of crepitation, as though there were air beneath the skin.

I was satisfied that he had an empyema, and advised that he be operated upon at once. The aspirator drew out a brownish fluid which looked like decomposed blood, and which was quite offensive. I removed a section of the rib, and about a quart of brownish fluid escaped, along with several large decomposed clots.

This operation was done at seven-thirty o'clock Friday night. I saw him Saturday morning, and he was perfectly comfortable. I have heard from him frequently since, and he has gotten along without an untoward symptom. He is now out of bed.

I removed a section of rib two inches in length, and put in a large double drainage tube.

Discussion. Dr. T. L. Butler: Dr. Roberts is to be congratulated on the outcome of his first case. It was certainly an unpromising case to start in with, as he operated four and a half hours after the injury occurred.

As to Case 2: I believe in injuries of this character, where the patient at the time of the injury shows by a physical examination that there is hemorrhage into the pleura, we ought to operate immediately.

I want to report a case somewhat similar to the one mentioned by

Dr. Roberts that I saw a few months ago. A young man was shot in Lancaster, Kentucky, and I saw him thirty-six hours after the injury. He was shot in the back. When I saw him he had a pulse of 110. He had slight elevation of temperature, and there was a large amount of dullness in the neighborhood of the wound in the back. He also had a wound of the arm, producing a compound comminuted fracture. In addition to this he was shot behind the angle of the jaw on the left side, the bullet coming out on the opposite side of face between nose and eye. I thought from the physical signs in the back, that we ought at least to open the wound and drain it. I was satisfied that there was blood in the pleural cavity.

In addition to the dullness in back, the belly showed some tympanites, particularly on the right side, and as he was quite tender to the touch along the rectus muscle of that side, I was a little at a loss to know just what to do. I was not satisfied that the bullet had not gone through and had penetrated the gut or stomach, but it had been thirty-six hours since the shooting, the man was in fairly good condition, and I thought that even if he was shot in the abdomen, at that late time it would be better not to open the belly. We decided to wait until the next morning, then to open the wound in the back and explore it thoroughly, and if the dullness was due to blood in the pleural cavity, which I believed it was, it should be drained.

The next morning he was put on the table and quite a large opening made, following the track of the bullet, going into the pleural cavity. As soon as I got my finger into the pleura there was simply a gush of blood, possibly more than a pint. A rib was shattered by the bullet. A portion of the rib was driven into the lung proper. All the loose bone was removed. In my manipulations I found the bullet, and of course that also was removed with some pieces of clothing that had been carried in.

The wound in the arm was simply drained. I enlarged the opening, but made no attempt to find the bullet. We could do nothing practically with the wound behind the jaw; there was nothing, in fact, to be done except to dress it.

The young man went along nicely, and in ten days he was sent here. In dressing him after he had been here several days a small portion of lung tissue came away. He had evidently gotten up a localized traumatic pneumonia which did not involve much area. He has made a fairly good recovery.

In these cases where there is dullness of large area, where we have reason from the physical condition to believe the pleural cavity contains blood, I think it is unquestionably the best thing to open at once, remove all loose bone, clothing, etc., and drain the pleura. It is the history of practically all these cases that they are followed by empyema.

Unusual Features of Pneumonia. Dr. J. G. Cecil: Although this appears to be a surgeon's meeting, I would like to introduce for discussion some of the rather unusual features of pneumonia that I have seen during the past season, and report a few cases briefly.

Each one of these cases, as far as I can make out, although I did not see them in the attack of grippe, was preceded by grippe or some condition similar to that disease. One of the cases I referred to at a meeting of this Society some months ago, in which there was very extensive involvement of lung tissue, the pneumonic process plainly marked by all the classical signs and symptoms, emigrating from lobe to lobe and from lung to lung until practically all of both lungs was involved, the attack running over a period of twelve or fourteen days. In this case, of course, there were none of the decided symptoms of the crisis, but the patient made a very good recovery; the first portions of the lung involved cleared up to some extent before the last portions were involved, and in that way it was possible for the patient to live through such an extensive involvement of lung tissue.

Later in the season, about the first of May, I saw a man in a similar attack of pneumonia following grippe, which ran exactly a similar course in spreading from lobe to lobe and from lung to lung until practically all of both his lungs was involved at one time or another, not all being in an active state of pneumonitis at any one time. This man did not suffer so much dyspnea, did not become cyanosed, never had such marked interference with the heart's action as did the first case. He was a man forty years of age, previous health good, and he also made a good recovery, a remarkably quick recovery, considering the extent of lung tissue involved. After the acute symptoms had subsided there was marked bronchial breathing and dullness over the entire posterior region of the chest. This patient recovered and has now gone to Europe, starting away from home within five weeks after he was taken sick.

The other two cases, both in men about forty years of age, also followed grippe. In one case the man was seized suddenly, after a practical recovery from an attack of grippe, with violent pain in his chest, great dyspnea, with very marked interference in the heart's action. I saw this case in consultation, and the peculiar feature in it was excessive hemorrhage. It was not the ordinary prune-juice or brick-dust sputum; there was nothing but blood, and great quantities of it. I have never seen a more extensive hemorrhage in any person bleeding from the lungs except in those suffering from tubercular involvement. He would saturate cloth after cloth, and this continued for a period of thirty-six hours or more. He bled so extensively from the lungs that I believe he lost a sufficient amount of blood to reduce the temperature. His temperature ranged from 101° to 102° F.

The other case was in a man about forty years of age, whom I only saw in consultation once, and that was the last day of his life. This case was also complicated by extensive hemorrhage from the lungs. It was not the ordinary sputum of pneumonia, but was pure blood, and he spat up great quantities of it. He went on from bad to worse. I remained with him for twenty-four hours, and until he died. A short time before his death he developed an acute attack of jaundice; his skin was as yellow as a pumpkin, and just before his death turned a peculiar greenish hue.

These last two cases are of particular interest to me on account of the special complication of hemorrhage. I can not designate it by any other term. I have never seen persons with pneumonia have such extensive hemorrhage in cases where there was no doubt as to diagnosis. I have never seen any thing like the extensive hemorrhage that these two men showed in pneumonia. I did not know what it meant; did not know whether it was one of those peculiar features of pneumonia complicated by grippe. They were not men that you could have said had previous lung trouble of a tubercular kind in which large vessels were opened, and the hemorrhage was not of that frothy kind which would lead you to believe it was due to edema of the lungs or extensive congestion only.

I simply report these two cases, giving in brief the symptoms, and the fact that one of them got well and the other died. I was much surprised that one recovered after such extensive hemorrhage from the lungs. I would like to ask if other members of the Society have observed similar phenomena in connection with this disease?

Discussion. Dr. J. B. Marvin: I thought I had learned something about pneumonia after the outbreak when I followed Dr. Cecil at the City Hospital, when we lost twenty-one out of twenty-two cases; but I learned something this spring about grippal pneumonia that I had not learned before. I saw in a week or ten days, in my own practice and in consultation, seven cases of pneumonia grippal in character, the first six of them affecting the left side. That was an unusual experience to me. I saw one or two beginning at the apex, going down with no head symptoms. This is contrary to the rule. I believe that apical pneumonia is more apt to give delirium and meningeal symptoms. Next the slow development of the physical signs of several of these cases, which I watched critically and closely; they presented the rational symptoms of pneumonia, the physical signs not being made out until two, four, and five days after the onset of the disease, and then the physical signs developed posteriorly, spreading as the doctor has indicated.

In one case that died, a gentleman had a chill on Sunday; I saw him on Monday morning. He had fever with gastro-intestinal symptoms. I saw here what we used to hear about in the South, the so-called biliary pneumonia, pain about the liver, pain in the belly, without symptoms referable to the lung for several days.

I saw a case in consultation with Dr. Holloway, the man having at the time all the symptoms of typhoid fever; the doctor had made this diagnosis; things went along in this way for about a week, when he suddenly developed a rapid pulse, and we found that the man had pneumonia at the apex.

I have never seen cases of pneumonia presenting extensive hemorrhage, such as the doctor speaks of. I have, however, seen cases where there was more than the usual amount of bloody expectoration. I thought when he spoke of this condition that he had gotten hold of two cases of acute pulmonary phthisis. I have seen one or two such cases. If both patients had died I would have believed that was the cause.

Grippal pneumonia certainly is not simple pneumonia; it is not exclusively croupous in character, neither is it catarrhal. To my way of thinking it is a combination of the two. You have some patches or perhaps a whole lobe that is in a state of fibrinous consolidation, and you have with it, and over and above it, it seems to me, a catarrhal pneumonia; and that is the explanation of its migratory character and

extensive involvement, clearing up in one place and progressing in another without destroying life.

Dr. William Bailey: I want to say that cases of pneumonia that I have seen in connection with grippe have, many of them, terminated fatally through failure of the heart, in my judgment due to grippe influence as well as the pneumonia. And particularly has that been the case when an additional tax was laid on the heart by the extensive involvement, the second lung becoming involved before the first had a chance to clear up. I have in mind one case particularly that I saw in consultation only two days before death, in which the rapid involvement made dyspnea a factor, and, notwithstanding the free use of strychnine and the use of oxygen, he could not be sustained, and he simply died by exhaustion instead of the extensive involvement of the lungs, really the apnea not being as manifest as was the asthenia. But undoubtedly we do have phenomena following pneumonia and following grippe that are somewhat anomalous, and it is difficult to say whether they are croupous or catarrhal, or combined. This is not the first time I have heard of the question of delayed physical signs of pneumonia; that has been with me all my professional life. I have had difficulty sometimes in making the physical conditions correspond to the history of the case; to the symptomatology, to the gravity of the symptoms where a physical diagnosis was impossible; although the patient had all the symptoms of pneumonia, yet nothing could be made out by percussion and auscultation, the characteristic physical signs not developing until several days after the symptoms had existed. I have tried to explain it in my own mind by the fact that this involvement was away from the surface of the lungs at first, the physical signs only becoming apparent when the involvement reached the surface. This has not been altogether satisfactory, but it is the best explanation I have been able to offer. The fact that so many cases of pneumonia have recently followed attacks of grippe enables us to explain why we do not have termination by crisis. If it was simple croupous pneumonia, then we ought to get, at a certain period, the typical termination by crisis, but in these cases it has not been so.

Grippe is really a much more serious thing than people ordinarily consider it. All grippe cases, as soon as recognized, should be put to bed at once, and should remain there for several days.

B. C. FRAZIER, M. D., *Secretary.*

Reviews and Bibliography.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, assisted by H. R. M. LANDIS, M. D. Volume I, March, 1901. Lea Brothers & Co., Philadelphia and New York. Price, \$10.00 per annum.

"This volume includes a review of recent advances in our knowledge in the following departments: Surgery of the head, neck, and chest; infectious diseases, including acute rheumatism, croupous pneumonia, and influenza; diseases of children, pathology, laryngology, and otology. We have from time to time referred to the volumes of this most excellent review of the medical and surgical sciences with much commendation. The present volume is in no wise behind its predecessors, and, in our opinion, this practical review is one of the most useful works that the medical practitioner can possess. The information is very carefully collated and placed in the most interesting and practical manner before the reader."

The chapter in this volume devoted to infectious diseases, which includes acute rheumatism, croupous pneumonia, and influenza, is one of the most valuable in the book, and is one of the most valuable contributions to the literature of acute articular rheumatism that has been placed before the profession. It gives in detail the work of inoculation with the diplococci from the throat of the rheumatic patient who had acute rheumatic pericarditis. The result of inoculation was to produce the same identical lesions as those found in the persons from whom the diplococci were taken, showing conclusively that rheumatic pericarditis can be produced by the diplococci. This is a most valuable article, and it will well repay those who are interested in this subject to purchase Volume I of *Progressive Medicine*, 1901.

A System of Practical Therapeutics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. Second edition, revised and largely rewritten. Volumes II and III. Philadelphia and New York: Lea Brothers & Co. 1901. Price, \$5.00 per volume.

The second and third volumes of this edition are now before us. They are fully in keeping with the first volume in every particular. We do not hesitate to say that this is one of the most complete works on therapeutics now in existence. The author has taken every precaution that is possible to make the work absolutely free from error. Every line of the work shows evidence of the greatest care on the part of the author to make a book as nearly perfect as it is possible. Dr. Hare is a great enthusiast, and no better evidence of his enthusiasm can be found than that which is manifested in the revision of this second edition on therapeutics. We commend it to practitioners and students of medicine as being one of the best books upon this subject, and predict that it will meet a large and rapid sale.

A Manual of Otology. By GORHAM BACON, A. M., M. D., Professor of Otology in Cornell University Medical College, New York. With an introductory chapter by CLARENCE J. BLAKE, M. D., Professor of Otology in the Harvard Medical School, Boston. In one handsome 12mo. volume of 422 pages, with 114 engravings and three colored plates. Cloth, \$2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This is a little manual of some four hundred pages devoted to diseases of the ear. In the second edition every thing has been brought up to date; several pages of new material have been added. "More especial consideration has been given to the Schwartz-Stack operation and to the use of a normal saline solution in intravenous injections." The book is compact, but is as thorough as it is possible to make one of its size. It contains one very valuable cut, which is almost worth the price of the book, namely, that illustrating the venous circulation of the face and that of the cerebellum, after Macewen. This most excellent cut will enable those who are not absolutely familiar with the anatomy in and about the mastoid region to familiarize themselves with it in a few moments. The relations of all the blood-vessels are clearly shown in the cut. This is an excellent book for the student and practitioner, and especially for the doctor who has little time to study out and look up the aural diseases that he may meet in everyday practice.

Atlas and Epitome of Obstetric Diagnosis and Treatment. By Dr. O. SHAEFFER, of Heidelberg. From the second revised German edition. Edited by J. CLIFTON EDGAR, M. D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 122 colored figures on 56 plates, 38 other illustrations, and 317 pages of text. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$3.00 net.

This book treats particularly of obstetric operations, and besides the wealth of beautiful lithographic illustrations, contains an extensive text of great value. The symptomatology and diagnosis are discussed with all necessary fullness, and the indications for treatment are definite and complete. In this new edition both text and illustrations have been subjected to a thorough revision. Most of the colored plates are new, and illustrate the modern improvements in technique as well as a vast amount of new clinical material.

This book is devoted to diagnosis of every thing connected with pregnancy, from the date of conception to the time of delivery. The work is condensed and is the better for being so, because the author has told all that is necessary to be known about each condition that is met with in practice, and where surgical or any other kind of interference is necessary, the details of procedure are laid down. Chapter v of the book is devoted to pregnancy, including premature labor. This is a most valuable chapter, and is, we think, worth the price of the book. It is a companion piece of Labor and Operative Obstetrics, and every doctor in the land should possess them both.

The Medical Diseases of Childhood. By NATHAN OPPENHEIM, A. B. (Harv.), M. D. (Coll. P. and S., N. Y.), author of the "Development of the Child"; Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary. With one hundred and one original illustrations in halftone and nineteen charts. New York: The Macmillan Company. London: Macmillan & Co., Limited. Price, \$5.00. 1900.

This volume contains more than six hundred pages, and is one of the most complete works of this kind that has ever been presented to the profession. The author has taken great pains in the matter of detail, which is important to the perfection of every book. The chapter on diseases of the kidneys is profusely illustrated, and this whole subject is handled in a masterful way. Much attention has been paid to the subjects that are usually found in special works, such as epistaxis, nasal polypi, adenoid growths; in fact, there is a chapter devoted to diseases of the nose and throat. Another chapter is devoted to diseases of the blood. Certainly nothing could be more important at this stage of advancement in medicine than a thorough study of the blood, and especially is this true in the young, where rapid development is going on. This is a most excellent work, and deserves the serious consideration of those engaged in study of pediatrics.

A Manual of the Diseases of Children. By JOHN MADISON TAYLOR, Professor of Diseases of Children at the Philadelphia Polyclinic, and WILLIAM H. WELLS. Second edition, thoroughly revised and enlarged. Philadelphia: P. Blakiston, Son & Co.

The second edition of this book comes to us thoroughly revised in every particular and up to date on all points. The authors have spared no pains in giving full details to every subject in the book. The chapters on general hygienics of children are among the best things in the book, and this is of more interest because many doctors as well as nurses and mothers fail to realize the importance of proper hygienic management of children. They are like tender plants; they deserve special care, and are easily affected by trivial matters, and it is important to pay especial attention to the hygienic management of these little ones. The book contains more than eight hundred pages, and is an ideal of the bookmaker's art. We are sure that the physician and student will find this one of the most valuable books upon pediatrics that has been presented to them for years.

Panama and the Sierras; a Doctor's Wander Days. By G. FRANK LYDSTON, M.D. Illustrated from the author's original photographs. Chicago: The Riverton Press. 1900.

It is evident that Dr. Lydston has given his readers a very vivid description of a most delightful trip to California and various South American points. Not only has he done this, but those of us who know the genial doctor can see his footprints at every move on the line. The book is a most charming one, inasmuch as you become interested in it from the beginning. The author has given the details of this trip, describing

minutely many things peculiar to the inhabitants and the country through which he traveled, and after all, this is the best way to describe what one sees in his wanderings. We commend it to our medical friends, not only for their individual use, but also for their patients when they are tired and worn out and wish a rest which can not be obtained as Dr. Lydston obtained it, but they can follow him mentally through his wanderings. The book is illustrated. The most striking picture, however, is the necktie party, which is the photograph of four men hanging as the result of a vigilance committee.

Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By Prof. Dr. O. HAAB, Director of the Eye Clinic in Zurich. From the third revised and enlarged German edition. Edited by GEO. E. DE SCHWEINITZ, Professor of Ophthalmology, Jefferson Medical College, Philadelphia. With 152 colored lithographic illustrations and 85 pages of text. Philadelphia and London: W. B. Saunders & Co. 1901. Price, \$3.00 net.

The great value of Prof. Haab's Atlas of Ophthalmoscopy and Ophthalmoscopic Diagnosis has been fully established, and entirely justifies an English translation of his latest edition. Not only is the student made acquainted with carefully prepared ophthalmoscopic drawings done into well-executed lithographs of the most important fundus changes, but in many instances plates of the microscopic lesions are added; the whole furnishes a manual of the greatest possible service, not only to the beginner in ophthalmoscopic work, but to one who has already far advanced and desires to compare the observations of his own service with those of the rich clinic from which Prof. Haab has gathered his plates.

There is little left to be desired in this book. The plates are the best we have seen, being true to nature in every particular. It is difficult to understand how a student of ophthalmology can afford to be without this valuable aid. Not only will the student find it valuable, but the man who is engaged in ophthalmoscopic work will find this book a very great aid in many particulars. We commend it to our readers as being a work of rare excellence.

Retinoscopy (or shadow-test) in the Determination of Refraction at One Meter Distance with the Plane Mirror. By JAMES THORINGTON, A. M., M. D., author of "Refraction, and How to Refract"; Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine; Ophthalmologist to the M. E. Orphanage, etc. Fourth edition. Revised and enlarged. Fifty-one illustrations, twelve of which are colored. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 89 pp. Price, \$1.00. 1901.

The fourth edition of this popular little book is before us, and, like its predecessor, is worthy in every particular. It is simple, concise, and clear in its exposition of this important subject. Its style is simple and easily comprehended, and one who is familiar with the ordinary laws of retinoscopy can readily master it. We commend it to our readers as being one of the very best books of the kind published.

Clinical Examination of the Urine and Urinary Diagnosis. A Clinical Guide for the use of Practitioners and Students of Medicine and Surgery. By J. BERGEN OGDEN, M. D., Instructor in Chemistry, Harvard University Medical School; Assistant in Clinical Pathology, Boston City Hospital; Medical Chemist to the Carney Hospital; Visiting Chemist to the Long Island Hospital, Boston. Illustrated. Philadelphia: W. B. Saunders & Co. 1900.

We have examined this book with great care, and have no hesitancy in saying that what the author has said in his preface concerning his efforts to furnish the practitioner and student with a more complete clinical guide has been fully carried out. The plates are the finest we have ever seen in any work of this kind, and while it is not as profusely illustrated as some books upon this subject, the illustrations are quite sufficient for all practical purposes. It ought to be remembered that there is a great deal of difference between the ordinary chemical examination of the urine and the clinical examination. Especially is this true when it comes to discuss this subject. In this book not only the chemical changes are discussed as chemical changes, but the author proceeds to tell why the changes in the urine should occur, and to give the prognosis of the disease or its change indicated by the specimen of urine, and it is in this that the book excels. This is the first edition of the work, and the practical nature of it insures a rapid sale, as it is certain to become a favorite with the practitioners.

Eichhorst's Practice of Medicine. A Text-Book of the Practice of Medicine. By Dr. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic of the University of Zurich. Translated and edited by AUGUSTUS A. ESHNER, M. D., Professor of Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each. Over one hundred and fifty illustrations. Philadelphia and London: W. B. Saunders & Co. Price per set, cloth, \$6.00 net. 1901.

The Germans lead the world in internal medicine, and among all German clinicians no name is more renowned than that of the author of this work. Dr. Eichhorst stands to-day among the most eminent authorities of the world, and his text-book on the practice of medicine is probably the most valuable work of its size on the subject. The book is a new one, but on its publication it sprang into immediate popularity, and is now one of the leading text-books of Germany. It is practically a condensed edition of the author's great work on special pathology and therapeutics, and it forms not only an ideal text-book for students, but a practical guide of unusual value to the practicing physician. As the essential aim of the physician will always be the cure of the disease, the fullest and most careful consideration has been given to treatment.

The Feeding of Infants; Home Guide for Modifying Milk. By JOS. E. WINTERS, M. D., Professor of Diseases of Children, Cornell University Medical College. New York: E. P. Dutton & Co., 31 West Twenty-Third Street. 1901.

This is a little book of nearly fifty pages devoted exclusively to the feeding of nursing infants and the modification of the different varieties of milk.

Atlas and Epitome of the Nervous System and its Diseases. By PROFESSOR DR. CHR. JAKOB, of Erlangen. From the second revised German edition. Edited by EDWARD D. FISHER, M. D., Professor of Diseases of the Nervous System, University and Bellevue Medical College, New York. With 83 plates and copious text. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$3.50 net.

In this atlas the author has portrayed an instructive section of medicine which is usually extremely difficult of mastery by students and practitioners. This work will be of great value to the physician. The matter is divided into anatomy, pathology, and description of diseases of the nervous system. The plates illustrate these divisions most completely. There is probably no work in existence in which so much is compressed within so small a space. The book is comprehensive and practical.

We had the pleasure of owning a former edition of this admirable work. It is a priceless gem to those who wish to fully comprehend the anatomy of the brain and general nervous system. Every detail of the practical anatomy of the organs with which it deals is so perfectly illustrated that one would not care to soil his hands in consulting the most perfect specimen extant, because he could not receive more knowledge from the specimen than he will derive from the plate. We commend it to our readers as being every thing that is claimed for it from the standpoint of the book-maker's art and that of the anatomist and pathologist.

Diseases of the Heart: Their Diagnosis and Treatment. By ALBERT ABRAMS, A. M., M. D., San Francisco, Consulting Physician for Diseases of the Chest, Mt. Zion Hospital and the French Hospital. Illustrated. 172 pp. Price, \$1.00 net.

"In this book the author discusses the subject of diseases of the heart entirely from a practical aspect. His most noteworthy researches in methods of diagnosis are here recorded for the first time in collected form, and the latest and most practical methods of treatment given in detail." This is a booklet of about one hundred and fifty pages dealing with the diagnosis of diseases of the heart, showing treatment of diseases of the heart and pericardium, and neuroses of the heart. It is a concise and well-written book.

The Acute Contagious Diseases of Childhood. By MARCUS P. HATFIELD, A. M., M. D., Professor Emeritus of Diseases of Children, Northwestern University Medical School; Professor of Diseases of Children, Chicago Clinical School; Attending Physician, Wesley Hospital. 142 pp. Price, \$1.00 net. Chicago: G. P. Engelhard & Co., 358-362 Dearborn St. 1901.

This is a well-written little volume containing nearly one hundred and fifty pages. As its title indicates, it deals exclusively with contagious diseases. Its opening chapter is devoted to scarlatina, which it handles very thoroughly; then follows the subject of measles, pertussis, varicella, variola, and winds up with la grippe. This excellent little book will be found very valuable to those who care to look up the latest in connection with acute diseases.

Atlas and Epitome of Labor and Operative Obstetrics. By Dr. O. SHAEFFER, of Heidelberg. From the fifth revised German edition. Edited by J. CLIFTON EDGAR, M. D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$2.00 net.

There is no branch of medicine or surgery that is so difficult to demonstrate as that of midwifery; hence any positive aid, such as this Atlas furnishes, is to be hailed with satisfaction. The author has added to the multitude of obstetric subjects already shown by illustration many accurate representations of manipulations and conditions which have never been before clearly shown. As a guide in the perusal of text-books and as a volume of ready reference, this book will prove invaluable.

This work is devoted to operative obstetrics, and is profusely illustrated by plain and colored plates, showing and demonstrating all the operations and positions that are common in the practice of obstetrics. It is a handy and ready book which should be in the hands of every practitioner of medicine. Like all of Saunders' works, it is faultless from the bookmaker's standpoint.

A Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A. M., M. D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City; Laryngologist to Columbus Hospital, the University and Bellevue Hospital Medical Clinic, and Demilt Dispensary; Member of the New York Academy of Medicine, Society of the Alumni of Bellevue Hospital, Medical Society of the County of New York, American Laryngological, Rhinological, and Otological Society, etc. Second edition. Revised and enlarged. Illustrated with 103 engravings and four colored plates. Lea Brothers & Co., Philadelphia and New York. 1901.

The second edition of Coakley comes to us much improved. "Each article has been carefully revised and such corrections and additions made as deemed advisable. A new chapter on affections of the upper respiratory tract in infectious diseases has been added, which, it is hoped, will meet the needs of the general practitioner." This is a ready book for the general practitioner and surgeon, and is one in which every thing has been rendered so explicit as to enable the reader to grasp the facts with little effort. We are sure that the second edition will be quite as popular as the first, which met with a large and ready sale.

A Syllabus of New Remedies and Therapeutic Measures. With Chemistry, Physical Appearance, and Therapeutic Application. By J. W. WAINWRIGHT, M. D., Member of the American Medical Association; New York State Medical Association; United States Pharmacopeial Convention, 1900; American Chemical Society, etc. 229 pp. Price, \$1.00 net. Chicago: G. P. Engelhard & Co., 358-362 Dearborn St. 1901.

This little book contains some two hundred pages dealing with new remedies and therapeutic measures. It is well worth the consideration of our readers, and we commend it to them as being one of the best little books of this kind upon the market. There is a chapter on sodium cacodylate that is well worth the price of the book.

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RECIPROCITY OF STATE BOARDS OF HEALTH.

The necessity for reciprocity between the State boards of health and the examining boards must be apparent to every one who has given the subject any thought. The difficulties which the average young doctor has to contend with at the beginning of his professional life are multitudinous, and every thing that can be done to lessen these burdens will benefit him and the profession, and also the public in general. The doctor who is really qualified to practice medicine in one State is equally as well qualified to practice in another, and he should be permitted to do so without further examination by the State boards of his new location. The presentation of credentials properly certified by the Secretary of the State Board of his former home should be quite sufficient. To carry this out properly, the State examining boards should be selected with the greatest care, so as to keep them free from political and medical college influences.

The State boards should inquire critically into the status of every medical college in the country, as to their general equipment and general qualification. There are many medical colleges that are not properly equipped to teach modern medicine and surgery. This is one of the difficulties in the way of establishing reciprocity between the States, and should be corrected by the boards. It is the duty of every

member of the examining boards to see that medical colleges are prepared to give their students proper facilities for qualifying themselves. Then they will have a far better class of men presenting themselves than at present. The graduates of schools without proper clinical and laboratory facilities should be barred from all examining boards, for no man is compelled to attend any school that is without proper facilities, as there are plenty of other schools that he may attend.

THE LAY PRESS AS AN EDUCATIONAL FACTOR IN THINGS PERTAINING TO THE PUBLIC HEALTH.

Since Dr. Koch's address before the British Congress the daily papers have been teeming with various and sundry reports in reference to it. The statement that tuberculosis is not transmissible through the agency of heredity—a fact fairly well established among the profession for several years—has been voiced from the editorial house-tops as a discovery announced for the first time in medicine. Naturally, the text of Dr. Koch's address has been garbled, but a great deal that is true has reached the public ear, and much good will accrue from its publication.

That the laity are woefully ignorant of things medical there can be no doubt. That this ignorance has been much enhanced by the publication of ridiculously perverted reports of things pertaining to medicine in the daily newspapers there can be equally no doubt. As an educational agent the newspaper is a potent factor for good or bad. Had the lay press announced years ago that tuberculosis was contagious, and that the sputum of tuberculosis patients was the active agent in disseminating the disease, its eradication would have become much simplified and advanced with the education of the masses.

Not far in the rear of the dread "white curse" there stalks another enemy to the public health—syphilis. The laity account it a purely venereal disease, and speak of it only behind closed doors. The press adds to this impression by whispering it to its readers as "blood poison" or "a loathsome disease," covertly hinting at its venereal origin. Yet how frequently does the physician meet with the extra-genital form of chancre! And in the vast majority of such instances, on account of the view-point of the laity on syphilis, all but the patient

himself remain ignorant of the character of the sore, a course of action that exposes countless numbers of innocent persons to the contagion.

The progress of medical and sanitary science has been impeded for ages by the ignorance of those outside of the profession. The lay press has afforded but little aid to scientific advancement, when it is in a position to do much. We feel that this lack of assistance is due in a great measure to a pardonable dearth of knowledge on matters contained in the province of medical science on the part of those engaged in editing the daily newspaper, and we would respectfully offer the suggestion that each paper retain on its staff a competent medical editor or censor, whose duty it will be to give the people the truth on matters pertaining to the public health.

Current Surgical and Medical Selections.

DISCUSSION OF THE NEURONE DOCTRINE IN ITS RELATIONSHIP TO DISEASES OF THE NERVOUS SYSTEM.—The Journal of Mental and Nervous Diseases devotes the entire number to three most excellent papers on the neurone doctrine.

The first paper, by Dr. Lewellys F. Baker, discusses the Anatomic-Cytological Relationship of the Neurone Doctrine to Disease of the Nervous System. A short history is given of the development of the subject, which shows that the modern conception dates further back than is generally supposed. The present view is lucidly set forth, and especial prominence given to the late work of Stefan Apáthy, whose demonstration of the neurofibrils and their relations to the nerve units is thought to be the most important discovery in neurological anatomy in recent years.

Bethe's work is also generously noted, and Mönckeberg's, who believes with Apáthy and Bethe that the neurofibrils are conducting elements.

A summing up by Edinger is given. He says: "A separation in the old sense that each cell exists anatomically for itself alone, entering only externally in relation to neighboring cells, can probably be no longer held without modification. But we must all the more hold fast to the fact that the ganglion cell (including all fibers going into it) forms a biological unit."

The Pathological Changes in the Neurone in Nervous Diseases is the subject of Dr. Spiller's contribution. Only his conclusions can be given in review:

"The fact that two neurones in connection with one another do not degenerate to the same degree and with the same rapidity from one lesion

is evidence that there is some difference in structure at the point where they come together, and that the essential elements of one neurone are not the same essential elements of another neurone.

"That degeneration may occasionally pass from one neurone to another is no proof that neurones do not exist. It is certainly not common for systemic disease to spread irregularly to neighboring areas. The views of Held, Apáthy, Bethe, and Nissl may force us to modify our conceptions of the neurone, but the evidence offered by the pathology of the existence of neurones, *i. e.*, of structures having a functional individuality, will have to be harmonized with the results of anatomical studies."

Dr. Sach's paper on *How Does the Neurone Doctrine Affect the Conception of Nervous Disease?* discusses degeneration and trophic influences in their relation to the modern concept of the neurone.

We would advise all who desire to possess themselves of the most advanced views on the neurone concept to read these papers carefully. No review can give any adequate idea of their value.—*St. Louis Courier of Medicine.*

RUPTURED LIVER: SUCCESSFUL OPERATION.—Dr. Carwardine (Lancet). A man, aged twenty-five, was admitted to hospital at 9 A. M. A case of glass weighing half a ton had fallen and crushed him against a wall. He walked with the aid of two men, but looked ill and collapsed, and complained of pain and tenderness in the right upper abdomen. At 11 A. M. his pulse was weaker, and there was an increase of liver dullness. At 12:30 P. M. he was restless, sick, and suffering considerable pain. His lips and gums were very pale, and his pulse was scarcely perceptible. He became pulseless and remained so for half an hour, when an operation was rapidly performed with simultaneous intravenous injections of saline fluid.

The abdomen was opened above the umbilicus. It was full of blood, and the liver was felt to be lacerated. The right rectus was therefore cut across. It was pale and did not bleed, and a large quantity of clot was turned out of the abdominal cavity. The whole hand could now be passed into a laceration of the liver, which extended right across the under surface from about the position of the gall-bladder (which could not be seen) to the posterior portion, dividing the liver almost in twain and leaving the upper part of the capsule floating freely on the blood clot. The remainder of the right lobe appeared to be badly smashed and could not be defined, owing to its crushed condition. The clots and fragments were removed. As suturing was out of the question, the laceration was packed with iodoform gauze. The abdominal wound was approximated, and nearly two pints of saline fluid were poured into the peritoneal cavity.

The duration of the operation was very short. The patient had severe dyspnea afterward, and was restless, thirsty, and sick. He remained pulseless for three hours, after which the pulse again became perceptible.

The pulse now gradually improved, and the dressings were found to be bile-stained. On the following morning he was much better. Subsequently the discharge was copious, bile-stained, and smelt strongly ammoniacal like urine. The gauze was removed at the end of a week and a temporary drain established in the right loin. Recovery followed.

The writer has been able to find recorded only three severe cases with collapse in which a successful primary operation was done. This fourth case is conspicuous by the early period at which operating became necessary, and by the fact of recovery from such grave anemia.—*The Post-Graduate*.

ACUTE NON-TUBERCULOUS MENINGITIS.—Netter. (*Rev. Mens. des Mal. de l'Enf.* Vol. viii, Nos. 8 and 9. Thirteenth International Congress of Medicine.)

Non-tuberculous meningitis may be primary (epidemic or sporadic), or secondary to otitis, to various suppurations, or to an acute local or general disease. In connection with otitis it must be remembered that phlebitis, sinus thrombosis, and cerebral abscess may occur as complications as well as meningitis, and that the nervous symptoms are analogous in all. The symptoms of meningitis in the course of acute diseases, and especially in the beginning of a pneumonia, may be due to serous, and not necessarily to suppurative, meningitis. There does not seem to be any hard and fast line which can be drawn between the epidemic and the sporadic form of the disease. The value of Kernig's sign must not be insisted upon too strongly, for while it is almost constantly found in non-tuberculous cases, it is also present in the majority of the tuberculous ones, therefore it can not be relied upon in differentiating the nature of a meningitis. Quincke's method of lumbar puncture is of invaluable aid in diagnosing meningitis, the physical, microscopical, and bacteriological examination of the fluid withdrawn determining the nature and cause of the process. In cases of suppurative meningitis repeated lumbar punctures may be of service in treating the disease, and warm baths according to the method of Aufrecht are of great value.—*Archives of Pediatrics*.

THE TECHNIQUE IN OPERATIONS FOR INTRALIGAMENTARY, CYSTIC, AND SOLID TUMORS.—Wathen, of Louisville, advises the removal of all tumors not larger than a fetal head per vaginam, either through the pouch of Douglas, leaving the uterus intact; or, where this can not be done, he performs hysterectomy, and never operates upon any patient who is not prepared for both the vaginal and abdominal methods, for complications may arise in any case that will promptly indicate the necessity for abdominal celiotomy.

In cases where the tumors are too large to be removed per vaginam, he begins the operation through the vagina by ligating or clamping one or both of the uterine arteries, as may be indicated—preferably between the

ureter and the internal iliac; and when the abdomen is then opened, he controls the ovarian arteries before he begins enucleation, thereby making practically a bloodless operation. In all cases in the abdominal part of the operation, he advises the application of forceps if possible during the enucleation, because this facilitates the work, and the ligatures can be much better applied after the tumor has been removed. He claims that we can much better avoid injury to vital structures if we primarily control hemorrhage, because the blood obscures the structures, and the surgeon, because of hemorrhage, may become confused in his work and hurries in a degree not consistent with good surgery. He believes that pathogenetic germs do not pass through a healthy peritoneum, and the reason why so many intraligamentary cysts suppurate is because of the unfolding of the mesentery, bringing the cystic wall in direct contact with the muscularis of the bowel, with no intervening peritoneum. As there is always danger of secondary giving way of the bowel where the mesentery has been unfolded, he advises in such cases to either preserve the capsule intact and suture it in the lower angle of the abdominal wound, or to remove superfluous parts, suture carefully and drain into the vagina through a tube introduced through an opening through the Douglas pouch. By this means the peritoneal cavity is entirely protected from bowel rupture or from any sort of infection from the capsule cavity; in the first instance, the drainage being through the abdominal wound, and the second, through the vagina.—*St. Louis Courier of Medicine*.

SOME EXPERIENCES WITH THE SCHLEICH MIXTURE.—P. Ilyn (*Klin. therap. Woch.*, July 20, 1900) has employed the Schleich solutions in 135 cases, and is well satisfied with the results. All disagreeable symptoms of ether narcosis, such as salivation and bronchitis, were but rarely noticed, and as long as respiration was active, sudden death, which is liable to occur after chloroform administration, seemed to be impossible. Depending upon the age, from 0.98 to 2.70 cubic centimeters of the mixture were found necessary per minute to keep the patients under. Excitation was noticed in twenty-five cases, nausea in nineteen, convulsive movements in three, trismus in two, and temporary cessation of respiration in two, one of which was an extremely weak child suffering from post-scarlatinal osteomyelitis. Respiration becomes more frequent and deep, and is most rapid when complete narcosis has set in, unless dyspnea is present, when an increased rate is not observed. There seems to be a close association between the degree to which the patient is anesthetized and the number of respirations, for when the patient is allowed to come out the normal rate gradually returns. The pulse is full and not rapid; as consciousness returns it becomes more frequent and weak. The author believes that, owing to the physical properties of the mixture, one can regulate the amount within perfectly safe limits by carefully and constantly watching the respiration and circulation.—*New York Medical News*.

TRAUMATIC PERFORATIONS OF THE MEMBRANA TYMPANI.—Francis Packard (J. A. M. A.) reports eleven cases of perforation of the tympanic membrane due to traumatism. Of 1,500 consecutive cases of membrane rupture taken from the record book of the Pennsylvania Hospital, these were the only ones attributable to injury. This showing, coupled with the statistics of other authorities quoted by the author, tends to demonstrate that traumatic perforations are not relatively frequent.

Traumatic lesions of the drum may be produced, according to Politzer, 1, by direct penetration of a foreign body into the membrana tympani; 2, by the extension of a fracture of the cranial bones to the membrane; 3, by a sudden condensation of the air in the external meatus or in the tympanic cavity, more rarely by a rapid rarefaction of the external air.

Packard's eleven cases were the result of: Struck by weight falling from a height, two; fall upon the head, two; introducing a foreign body, one; struck by wave while bathing, one; blow on ear (fist), two; working in caisson, one; struck with weapon, one; blow on head, but from what not ascertainable, one.

The medico-legal aspect of traumatic perforation is discussed by the author, and the ultimate termination of such injuries, when uncomplicated with damage to the ossicles or labyrinth, he says, is usually healing of the perforation.

Little treatment is required, the handling of the case being left to nature as far as possible. A little clean, dry cotton may be kept constantly in the external auditory meatus, and if there be much discharge the gentlest possible cleansing will suffice.—*The Chicago Clinic.*

CEREBRAL ABSCESS SECONDARY TO TYPHOID.—A. C. Brown (Edinb. Med. Jour.) reports a case which is interesting on account of its etiology, the difficulties in the way of diagnosis, and the success of the treatment. No instance has yet been recorded in which pyogenic organisms gaining access to the circulation from the intestinal ulcerations of typhoid have been deposited in the brain with the production of a suppurative focus. In this case the patient, a girl of nineteen, developed the symptoms of Jacksonian epilepsy shortly after discharge from the hospital, where she had been treated for a moderately severe attack of typhoid fever. The nervous disturbances were purely motor in character, sensory symptoms and cerebral derangement being entirely absent, so that the focal lesion could be definitely located in the right Rolandic area, as the convulsions affected the left arm and leg. The nature of the lesion was more difficult to determine; functional disturbance of the cerebral centers, abscess, tubercle, and syphilis were one by one considered and rejected. Against abscess were the position of the lesion, the absence of any exciting cause or rise of temperature (a blood examination was not made), and a provisional diagnosis of a rapidly growing gliomatous tumor was made. On operation, however, the error was recognized and three ounces of pus evacuated, after which the patient made a complete and uneventful recovery.—*Medical News.*

Special Notices.

THE preparations of "PEPSIN" made by Robinson-Pettet Co. are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufacturing house. (See advertising pages.)

SANMETTO IN ENLARGED OR ATROPHIED PROSTATE WITH URINARY DIFFICULTIES.—The cases in which I have had occasion to use Sanmetto are quiet numerous and varied, both acute and chronic, and when indicated have produced very satisfactory results, both to me as well as to the patient. For a period of three years Sanmetto has been my sheet-anchor in the large majority of cases of prostatic and urinary difficulties, both in enlarged prostate as well as atrophied conditions. I may sum up the whole category of prostatic and urinary ailments, and say in my experience that Sanmetto covers more general indications and is more reliable in my hands than any other remedy. I use and have great confidence in Sanmetto.

Toledo, O.

J. S. FISHER, M. D.,

1876 Pulte Med. Col., Mem. Nat. Homeo. Med. Ass'n,
Mem. Ohio State Med. Soc., and N. W. Ohio Med.
Soc., and Toledo Med. Soc.

THE ANODYNE TREATMENT OF ACUTE PERITONITIS.—McCaffery ("The Etiology, Pathology, and Treatment of Acute Peritonitis") observes that the most pronounced indication for treatment in peritonitis is that for the relief of pain. Blisters and counter-irritation, the older resorts, are practically useless. Hot-water bags and poultices are far superior, but the relief they afford is only temporary. In some cases the ice-bag is more grateful than hot applications. But whether hot or cold is employed, it should be relied upon only until other lines of treatment can be instituted. Papine should be given in teaspoonful doses every hour, and the doses repeated frequently enough to afford the desired results. Relief from pain, short of narcosis, should be sought, and this is generally easily obtained by proper dosage. Papine does not produce nausea, but rather prevents this symptom. In the event of the development of more or less prostration, a proper stimulant, such as strychnine or nitro-glycerine, should be judiciously employed.—*Medical News.*

THE EARLY DIAGNOSIS OF LOCOMOTOR ATAXIA.—The poor results derived from the treatment of tabes are often due to the fact that an early diagnosis has not been made, or that patients do not apply for treatment in the early stages of the disease. Erb (Med. Wochenschr.) details a series of cases which had all been preceded by symptoms of secondary syphilis, some as far back as twenty-four years. In one group of cases the tendon reflexes were normal even after four to seven years' duration of slight lancinating pain, bladder insufficiency, sensory disturbances, easy fatigue, slight pupillary sign, and "Rhombberg's symptom." A second group presented no subjective symptoms whatever, and but very few and almost unnoticeable objective symptoms. Still another group was attended by marked gastro-intestinal disturbances, not typical of tabes, and with bilateral paresis of the sixth nerve and pupil sign. Author insists on the necessity of always investigating the knee-jerk and pupil reflex in suspected cases. Tabetic symptoms with an antecedent syphilis are always serious. Absence of a syphilitic history does not establish the existence of tabes, even though some symptoms may exist. For the pains in tabes dorsalis, Antikamnia and Salol Tablets have been found most excellent when given in doses of two tablets every two or three hours. The antikamnia acts particularly upon the spinal cord and its sensory tracts, and consequently takes the place of opium and its alkaloids, so often used to relieve patients subject to these attacks. The favorable effect of salol in this and similar conditions is well known.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNĀ."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE CONDUCT OF THE SECOND STAGE OF LABOR IN PRIVATE PRACTICE.*

BY EDWARD SPEIDEL, M. D.

*Adjunct Professor of Obstetrics and Chief of the Gynecological Clinic, Hospital College of Medicine,
Louisville, Ky.*

Every one recognizes that the aseptic details possible in well-regulated hospitals and infirmaries can not be expected in private practice, especially among the poorer classes; but the physician should strive to conduct his work on the lines carried out in such institutions, and come as near that standard as his surroundings will permit. With the paraphernalia contained in this little package, which can be easily taken to every labor case, and with a few clean sheets and towels, hot water and soap, every reasonable demand of aseptic obstetrics can be complied with.

This package contains a hand brush, small package of sterilized gauze, two oz. powd. boric acid, two oz. lysol or other liquid antiseptic; scissors, linen tape or corded silk for the cord, chloroform, one half doz. five gr. quinine pills, sol. two per cent nitrate of silver, ergot, dropper, needles, silkworm gut, needle holder, perforated shot, and a soft rubber catheter.

The package is described in detail, together with instructions for the preparation of the patient for labor, in an article on "Asepsis in Labor" published in the Louisville Monthly Journal of Medicine and Surgery, November, 1900.

*Abstract of paper read before the Kentucky State Medical Society, May, 1901.

As to the preparation for the second stage of labor. The vulva, thighs, and abdomen of the patient having been thoroughly cleansed, a clean folded towel placed over the vulva and fastened to the garments in front and behind, and a clean nightgown over this, the patient is ready for bed. This has been previously prepared by placing a piece of oil-cloth over the mattress, a clean sheet upon this, and then at the place where the hips of the patient will rest, a clean sheet folded several times or a bran bag. The bran bag is made by preparing a bag of cheese cloth, one yard square, boiling it thoroughly with soap and water, and filling it with one half bushel of sifted bran. Either of these expedients serve to absorb the discharges during delivery, the bran bag more so than the sheet, and the patient is spared the discomfort of lying in a pool of blood and liquor amnii until labor is completed.

The patient is put to bed in the dorsal position, the pad removed from the vulva, the nightgown neatly folded up to the umbilicus and held in place by a few safety-pins. A folded sheet extends from the neck of the patient to the symphysis pubis, another from the feet upward, overlapping the first. In cold weather a blanket may be placed between each sheet. The physician in the mean time has made his preparations for the aseptic conduct of the labor.

A clean towel is laid upon a chair, upon it two clean cups filled with boiling water, and in each is dissolved a teaspoonful of powdered boric acid. In one is placed two ligatures for the cord of silk or the linen tape before mentioned, which I have found excellent for the purpose, and on top of this cup is placed the clean scissors. At the side of the other cup are placed one half dozen pieces of sterilized gauze and a hypodermic syringe filled with aseptic ergot. The front of the chair is occupied by a clean basin, holding a half gallon of one per cent lysol solution or other antiseptic, according to the preference of the physician. At the head of the bed is a little stool or stand for the chloroform mask and bottle.

Having cleansed his hands thoroughly by scrubbing with soap and water, the physician takes a chair by the side of the bed, placing a clean towel across his lap; the chair containing the antiseptic solutions is to the right side and a little behind him, within easy reach of his right hand, which he aims to keep aseptic throughout the labor.

The nurse or attendant sits upon the lower end of the bed and braces the knees and holds the wrists of the patient during pains, and

manipulates the lower sheet when the physician makes an examination. The waters have ruptured, and the patient is having the characteristic pains of the second stage of labor. At the onset of each pain a small quantity of chloroform is poured upon the mask and held to the patient's nostrils with the left hand, which is reserved entirely for this purpose, and should not come in contact with the right hand, which, clean and aseptic, rests upon the towel across the physician's lap.

The diagnosis having been made, vaginal examinations should be avoided entirely thereafter in an uncomplicated case. The progress of the labor can readily be determined by placing the palmar surface of the fingers of the right hand, previously immersed in the lysol solution, against the vulva, the nurse lifting the lower sheet slightly for that purpose.

When the head distends the vulva and does not recede between pains, then it should be pushed back to prevent anemia of the parts and greater liability to rupture. When expulsion is about to take place, a larger quantity of chloroform than usual should be poured upon the mask and the presenting part allowed to slip out slowly with as little injury to the perineum as possible. Pressing the part toward the symphysis pubis is the best means to use for this purpose. Immediately after the birth of the head a piece of gauze wrapped around the right index finger is dipped into the boric acid solution and used to mop the mouth and free the nose from mucus to prevent its aspiration into the trachea when respiration is established. The head is then directed toward the symphysis pubis, and with the next pain the posterior shoulder is released; then directing the parts toward the perineum, the anterior shoulder and the trunk slip out. The child should be grasped by the legs and held head downward for a few moments until it cries lustily, then wrapped in the baby blanket ready and warmed for that purpose and laid upon the abdomen of the mother between the umbilicus and symphysis pubis. This position was suggested in one of the late journals on obstetrics, and having tried it in a number of cases, I recommend it as a better procedure than the customary one of letting the child lie between or across the legs of the mother or held by an excited attendant. On the abdomen of the mother the child is free from the mess that always accompanies the discharge of the ovum, the mother lies quietly, exhausted by her previous efforts, and the weight of the child may perhaps in a way be a safeguard against post-

partum hemorrhage. The necessary manipulations can be conducted more readily than when the child lies between the legs of the mother. The child should lie upon the right side with its back turned toward the face of the mother, as that position is said to favor the closure of the foramen ovale.

While waiting for the cord to stop pulsating, the eyes of the child are bathed with pledgets of gauze dipped in the boric acid solution, and a drop of two-per-cent solution of nitrate of silver is placed in each eye at the outer canthus. After fifteen minutes, or when the cord has stopped pulsating, it should be ligated with the linen tape which has been lying in the boric acid solution in the other cup during this time. It should be tied toward the mother and then within an inch and a half of the child's abdomen, tying it as with a large pedicle, a double knot, then bringing the ligature around and tying on the other side. The cord should be wrapped in a small piece of sterile gauze and the child turned over to the nurse. After the baby has been anointed with olive oil or fresh lard and the excess of grease wiped off with a soft cloth, the physician dresses the cord by cutting a hole in the center of a piece of gauze about four by eight inches, draws the cord through it, dusts it liberally with powdered boric acid, and folds the gauze smoothly over it; instructs the nurse to fasten the belly band over this, and not to disturb the gauze until the cord drops off.

LOUISVILLE.

SOME INTERESTING EXPERIENCES IN OBSTETRICS.*

BY W. E. SLEET, M. D.

It has been said, and doubtless is true to a great extent, that a great number of the most important cases occurring in the hands of the country practitioner have never been reported, and that, therefore, medical science and medical literature have been baffled to a great extent in their great struggles of "upward and onward." By this remark I have been prompted to simply report a few cases which have occurred in my practice, which, to my mind, seldom occur in an ordinary practice.

CASE I. Was called October 27, 1897, to attend Mrs. W., age forty, primipara; married twenty years; patient was delivered by the use of chloroform and forceps, after several hours of hard labor, of a well-

*Abstract of paper read before the Kentucky State Medical Society, Louisville, May, 1901.

developed male child weighing about twelve pounds. The child was "stillborn." In delivering the placenta it was found to contain another child, in which it was evident that development has ceased about the twelfth or fifteenth week of gestation; the placenta, a very large one, to all appearances in a perfectly normal condition. Two children attached to one placenta, one fully developed and the other undeveloped.

CASE 2. Mrs. L., age twenty-five, multipara; called to see me at my office October 1, 1900, she then being in the eighth month of pregnancy, stating that she desired an examination, as she had an abnormal growth within the vagina. Upon examination there was found situated upon the anterior wall of the vagina, just under the pubic arch, a growth about two to two and a half inches in length and about one and a half inches in diameter, hour-glass in shape, the distal or vaginal end of which having a cauliflower-like appearance, from which exuded a milky-like, creamy, odorless discharge. It being so near the time of expected labor no surgical procedure was advised. On the 13th of November, 1900, she gave birth to an eight-pound child, suffering no inconvenience whatever from the growth, as during labor the mass was brought down and outside of the vagina, and held outside until the passage of the child, when it was allowed to recede. The puerperal state was passed in the usual way without any complications whatever. Now six months since the labor occurred, the growth having entirely disappeared, no treatment whatever being used except douches of warm water morning and night.

CASE 3. Mrs. P., age eighteen, primipara; gave birth to her first child December 10, 1894, who is now a strong and well-developed boy of nearly six and a half years of age. On December 10, 1897, she gave birth to a second child, a son, also well developed, and weighing about eight pounds, which died December 14th, four days after birth, from icterus neonatorum. On October 21, 1898, she gave birth to a third child, a son, also well developed and weighing about eight pounds, which died October 24th, three days after birth, from icterus neonatorum. On January 29, 1900, she gave birth to a fourth child, a son, also well developed and weighing about eight pounds, which died February 1st, three days after birth, from icterus neonatorum. On March 17, 1901, she gave birth to her fifth child, a daughter, also well developed and weighing about eight pounds, which died March 21st, four days after birth, from icterus neonatorum.

The patient was attended by Dr. R. W. Hicks, of Midway, Ky., during the birth of the fourth child, and by Dr. W. H. Coffman, of Georgetown, Ky., during the birth of the fifth and last child.

Post-mortem by Dr. Hicks and myself upon the fourth child revealed the fact of the absence of the common duct, or ductus communis choledochus, instead there being only a small fibrous band. Liver normal size; no cirrhosis; gall-bladder in a rudimentary condition, and contained about half drachm of a serous fluid; hepatic and cystic ducts apparently normal.

If you will note, these children were all perfectly developed. From twenty-four to forty-eight hours after birth they gave no evidence whatever of icterus, the first symptom being that of vomiting, after which the discoloration of the skin would appear in a few hours, becoming more and more pronounced, after which the children would become perfectly limp or flaccid, or so-called "limber-neck," regurgitating all fluids and dying within a few hours.

Four cases of grave icterus neonatorum, the children of one mother, in successive births, all resulting fatally within seventy-two to ninety-six hours after birth.

MIDWAY, KY.

MISCARRIAGE AND ITS TREATMENT.*

BY WALKER B. GOSSETT, M. D.

Instructor in Obstetrics in the Louisville Medical College; President of the Louisville Society of Medicine.

A miscarriage is an expulsion of the contents of the gravid uterus before the fetus is at a viable age, and when the expulsion is not produced by criminal measures. If the expulsion is due to criminal procedure, then the term abortion should be used instead of miscarriage.

The degree of development of the ovum makes a difference in the phenomena of the miscarriage. A miscarriage at the first or second month is not similar to one of the fifth or sixth month. During the fifth or sixth month a miscarriage is very much like a labor at full term. At the first month it is similar to a painful menstruation. During the second month the pains come with some regularity, and at the third month this is more marked, and continues to become more marked as the pregnancy advances.

*Abstract of paper read before the Kentucky State Medical Society, May, 1901.

The course of a miscarriage is pain, hemorrhage, dilatation of the cervix, and expulsion of the contents of the uterus. If there is persistent hemorrhage, miscarriage usually occurs, but even in spite of a bleeding which may continue for a considerable time or return at intervals during the whole duration of pregnancy, the case may go on to term.

If the cervix becomes markedly softened and the os dilates, the ovum will ordinarily be cast off, and yet the os has dilated sufficiently to admit two fingers, but has again retracted and pregnancy has pursued its course. Playfair has reported cases in which four or five fragments of decidua, each as large as a fifty-cent piece, were cast off in the third month of pregnancy, but the woman went on to term.

If the hemorrhage is persistent; if the os dilates; if there is felt presenting within the os the ovum; if the pain is considerable, and, above all, portions of the ovum are expelled, the miscarriage may be pronounced inevitable. Tarnier calls attention to another sign which he believes to be valuable as indicating an unavoidable miscarriage. This is the effacement of the rather acute angle formed anteriorly between the neck and body of a pregnant uterus. The disappearance of this angle indicates a contraction of the longitudinal fibers of the uterus and a descent of the ovum.

Before the end of the third month, while the placenta is not yet fully developed, a woman is more apt to miscarry, and also at the time for her menstrual period. Sometimes in the early months the fetus is torn through the decidua, and the chorion and the amnion are thrown off afterward; this is more apt to be when an abortion has been produced by instrumental means.

It is well to have the expelled portions saved, so you can tell what is retained. The placenta is usually retained a long time in the early months, because the attachment is strong and fatty degeneration does not occur soon; also, in the early months the placenta is not large enough to stimulate uterine contractions. The prognosis of a miscarriage is good if every thing has been expelled; if not, it is bad, the retained parts leading to hemorrhage, sepsis, and disease of the uterus.

The treatment of a miscarriage will differ much accordingly as we wish to prevent or hasten the expulsion. The prophylactic treatment consists of removing the cause, the most frequent being syphilis; posterior displacements, endometritis associated with laceration of the cervix, and the habit of miscarriage. If the father has had syphilis,

place both the man and woman upon anti-syphilitic treatment. If the woman, place her upon the treatment before and during the pregnancy.

In posterior displacements of the gravid uterus replace it and keep in position; the uterus must be replaced at or before the third month, and held in position until the end of the fourth month. At this time the uterus has risen out of the pelvic cavity, and there is no danger of the fundus becoming caught under the promontory of the sacrum.

If endometritis, it must be treated during the interval of pregnancy. If a lacerated cervix, it must be attended to. The habit of miscarriage, an unscientific term, is only applied to a certain class of cases for which we have no better term. There is, of course, a definite cause in every case of a miscarriage, but sometimes this cause is so slight or obscure as to entirely escape notice. There are many delicate, refined women of nervous temperament in whom the mere hearing of something unpleasant or repulsive will excite nausea and vomiting, because their nervous systems are thoroughly hyperesthetic, and in this class of cases the slightest cause is often sufficient to induce a miscarriage. Such women are so constituted as to their nervous systems that it takes very little to make the uterus bear down on its contents and expel them. It is very difficult for a woman of this kind, even under the most favorable circumstances, to go to full term without encountering some occurrence that will give rise to a miscarriage.

In a threatened miscarriage, notice severity of the pains, the amount of hemorrhage, and particularly the degree of dilatation of the cervix. You must by these means determine if it is an inevitable miscarriage. As a rule the hemorrhage in a threatened miscarriage is not so profuse as to cause danger to the mother; if so, you will have to resort to the use of the tampon, but there is danger of the tampon increasing the pains.

Opium enjoys a well-deserved reputation in these cases; it is our sheet-anchor; give it for its effect. A woman can not miscarry without pains. A good routine medical treatment is a suppository of a grain of the extract of opium morning and night, and a dram of the fl. ext. of *viburnum prunifolium* three times daily. In the majority of cases of an inevitable miscarriage the delivery may be left to complete itself by the natural forces unless the hemorrhage be excessive. If the hemorrhage is excessive, then use the tampon; it stops the hemorrhage, stimulates uterine contractions, and promotes complete separation of the ovum from the uterus.

Before using the tampon, be sure to empty the bladder and the rectum. When removing the tampon, be careful not to rupture the membranes. . If can not easily pass the finger around the ovum, replace another tampon. The after-treatment is rest, as after full term. In cases of miscarriage when the fetus has been expelled and the miscarriage is incomplete, the whole or a portion of the placenta remaining, it is advisable to at once proceed to clean out the uterus by the use of the curette.

Sometimes you can remove an adherent placenta with the finger, but there is the thickened decidua which almost invariably remains behind in the early miscarriages; this can not be gotten with the finger, so there is nothing better than the curette to remove this condition. If you are unable to remove a retained placenta or parts of one with the finger, and circumstances are such that the curette can not be used, then you will have to resort to the use of the tampon and trust to nature to rid itself of the offending contents. Before using the cotton tampon, or if use the gauze tampon, it is advisable to introduce a strip of gauze just within the internal os and then pack the cervical canal; this is more liable to bring on uterine contractions and expulsion than just using the vaginal tampon.

In conclusion, I wish to emphasize that a curettment in these cases should be considered a major operation, and as great care should be exercised as in making an abdominal section.

LOUISVILLE.

STAB WOUND FOLLOWED BY PNEUMONIA: REPORT OF A CASE.*

BY L. L. COLE, M. D.

On June 23d a young man, age twenty-five, strong and healthy, of a vigorous, robust constitution, became intoxicated and got into a fight, in which he was stabbed in the chest about two inches from the spinal column and about an inch from the lower border of the scapula on the right side. The cut was about two and a half inches long, and extended in a nearly horizontal direction. It was made with a round-pointed knife. The knife struck a rib, passed across obliquely, severing the flesh from about half its surface and chipping off a small fragment from its lower border, thence between the ribs to the next. There

* Read before the Muldraugh Hill Medical Society, August 8, 1901.

was a small opening made into the inside about half way between the two ribs. It was very small, however, for I could barely insert the point of a small probe into it. It was done at a church, and when I arrived about an hour and a half after the fight occurred I found him very sick and considerably prostrated, both, perhaps, from the whisky he had consumed and from the loss of blood, which was considerable. His comrades had him lying on his back on the ground with nothing over the place except his shirt, which by this time was saturated with blood. I stitched up and dressed the wound the best I could under the circumstances. They started to take him home in a buggy, but he got so sick, and perhaps fainted once or twice, that they had to make a litter and carry him. He lived some three or four miles from the church. I saw him the next day and for four or five days afterward. For the first two or three days I found his temperature about 101° to 102° ; considerable soreness in the region of the cut, and in fact all over the right side, especially about the lower border of the right lung; after which the temperature dropped to normal, the soreness subsided greatly, and when I dismissed him the wound was healing nicely, and it looked as though he would be well in a few days.

On July 7th I was called to see him again. On examining him I found him to be suffering from what I pronounced a case of croupous pneumonia. The disease involved the lower lobe of the right lung. He had almost a typical case. It came on with a chill, followed by a rise of temperature. He had a full, strong, rapid pulse, temperature 104° , pain in the side, and in fact all the prominent symptoms of pneumonia, such as cough, rusty sputum, etc., dullness on percussion, and upon auscultation all the familiar signs of the various stages. He passed the crisis on the ninth day. He is now up and going about, but his lung has never cleared up just right. He still has a cough, but very little expectoration. There seems to be a hardening or thickening of the lung structure, and the air does not enter it as it should. He still complains of some pain in the side, and is very weak, pale, and emaciated. I can not help but think that the cut was in some way responsible for the pneumonia, perhaps from the absorption of septic matter. I would like opinions from the various members of the Society in regard to it; also suggestions as to the method of treatment to be pursued at present, especially with a view to getting the lung cleared up.

MILLERSTOWN, KY.

**THE BETTER ORGANIZATION OF THE MEDICAL PROFESSION
IN THE STATE OF KENTUCKY.***

BY J. SMITH, M. D.

Having been requested to write a paper at this meeting, and no special subject having been assigned to me, I suppose I have the whole field of medicine to choose from, as well as all questions bearing upon it, especially such as will better prepare, serve, and equip its votaries to successfully contend with the various diseases which they may be called upon to treat.

In view of the beneficial influences of medical associations upon those who attend and participate in their exercises, I could not more profitably occupy your time than by calling your attention to the advantages of medical societies; their influences for good upon those who attend them, their instrumentality in educating the public mind in regard to the importance of our calling, and, through the public sentiment of the State, thus engendering and impelling our legislators to enact laws for the better protection of the health and lives of our citizens, and incidentally for the better protection of medical men in their natural rights. There are in Kentucky one hundred and nineteen counties, and if our medical brethren were sufficiently alive to their duty and interests there would be one association to every county. But how stands the matter? Out of the four thousand physicians in the State, only about one thousand belong to county, district, or State associations. We can not expect a successful State association while this state of thing exists.

Are there no means by which our medical brethren can be awakened from their lethargy and indifference? Are medical societies of no value? To an intelligent mind such a question is superfluous. The most interesting, instructive, and practical part of our literature is derived from this source. But it may be answered that the associations of our cities afford ample reading material for country physicians, and there is no advantage in organizing little societies all over the State. As well might the Christian churches, the Masonic and Odd Fellows' lodges, which dot our State all over, and enlighten and instruct their votaries and carry comfort and consolation to thousands of distressed souls,

* Read before the Muldraugh Hill Medical Society, at Elizabethtown, Ky., August 8, 1901.

leave the good work which they accomplish to churches and lodges of cities.

Medical associations are advantageous to physicians in many ways when properly conducted and participated in. They brighten our ideas and give us new ones; they stimulate our ambition, which in many of us is apt to languish unless a stimulus is now and then applied; they lead to and in many respects compel investigation and study, for no man willingly exhibits himself a fool and ignoramus. The physician who lives isolated, never coming in contact and holding communion with his fellow-practitioners, grows rapidly antiquated and out of date. He loses interest in his profession, ceases to study, and soon becomes a drone in the hive of medical industry. Diseases assume new shapes and present new features in almost every epidemic. The treatment must be modified to suit the case, and this modification is largely the result of experience. The experience of a number of men is superior to that of an individual, for the field of research is so extended that a single individual can not successfully cultivate it. He over-crops, and of necessity thorns and thistles will smother out many plants which would otherwise bud and blossom and yield most delicious fruit. In a free discussion of a particular disease by a number of intelligent and observing medical men, all giving the results of their experience, the success attending certain remedies, much that is profitable may be learned by all, and doubtless in many instances human life may be preserved.

To those who think experience and observation of city physicians, as revealed in the transactions of their associations and the text-books written by them, are a sufficient guide, and all that is needful to those who are practicing in the country, I would make the suggestion, and I believe it is well founded, that the same diseases prevailing in our cities are often so modified by surrounding influences as to require a very different treatment from that which would be proper in the country, or influences may prevail in the country requiring a modification of the treatment in our text-books; hence from intelligent medical men in our midst we can often obtain useful and practical information not obtainable elsewhere.

Medical men in Kentucky are as intelligent as those of any State. There are four thousand registered physicians in the State. We are distributed all over the country; scarcely a family is ten miles from a physician. Every neighborhood has one or more. We visit and are

the familiar advisers of every family; we know almost every man, woman, and child in the State. We have the opportunity for the exercise of an influence which attaches to no other class of men. Why is it, then, we have accomplished so little in the way of legislation for our profession? In other States the rights of physicians are regarded and protected; they receive a fair compensation for their attention to the poor; they have State boards of health; the talent and worth of the profession are appreciated, and their rights are awarded them. But how is it in Kentucky? What influence have we? By the untiring industry and devotion of a few men we have obtained a law establishing a board of health, but our legislators have only made an appropriation of \$2,500 up to last year, when they increased it to \$5,000, to pay the expenses of this board, while it appropriated \$6,000 for the pleuro-pneumonia bill, showing very clearly by their act that they consider the prosperity of the State depends more upon the lives of cattle than upon the protection of the lives of its citizens. Shame upon such legislation!

I will, for a time, call your attention to a single grievance which has borne heavily on many of us, and which justice demands should be somewhat abated; the grievance of which I complain is medical attention to the poor. The old Jewish law provided that one tenth of every man's earnings should be set apart for charity and for the service of God. The political economists of all Christian lands have regarded this as a burden too onerous for the people to bear, hence this law of divine origin has been abrogated in all Christian communities, and all classes of men are exempt from its provisions except the doctors. If we were required to bestow only one tenth of our earnings to charity there would be rejoicing in our ranks. We bestow more to charity than any other class of men. One tenth! Many of us bestow as much as one fourth, and some as much as one half, to the poor.

Is it right we should give our time and labor to charity? We have our families to support; we bear our equal burdens of society, we pay our taxes equal with others, we do as much for the support and maintenance of good government as those following other pursuits; we rarely ever, in any sense of the word, become a charge upon the public. For fifty years I have labored for the poor without pay or reward, and many of you have done the same for a long term of years, and this is too much of a good thing. A single class should not monopolize such a large share of Christian charity; it should be distributed among

the tax-payer of our respective communities, where it rightly belongs. It is said that "he who giveth to the poor lendeth to the Lord." Other tax-payers as well as doctors should have a share in this loan, for the security is said to be good and the dividends, we are told, are unlimited.

I have at times discussed this question with my neighbors. Some advise me to charge the rich more for my services. I do not know how it is elsewhere, but in my locality no class of men will complain louder or drop you so quick for high charges as the rich; so this is no remedy. Others have advised me to refuse to visit the poor, but this does not work satisfactorily. No, gentlemen, refusing to visit the poor is not the remedy, I say. In the country where they are scattered over an extent of territory, and no provision made by law for medical attention, it is not the remedy. All the better and more generous feelings of our nature cry out against it. Our profession is one of mercy, and will ennoble and dignify; all of its true votaries condemn such remedy.

There is no remedy short of complete organization and concert of action among medical men. No body of men ever accomplished any thing without organization. If we will organize and discipline our army of four or five thousand men, we can effect all needed reforms. The only way possible for us to organize and discipline our forces is through county, district, and State associations. Let county associations be organized in every county, not nominally but actively; not lazily, but industriously; not for mere show and sham, but for active work; and my word for it, every society can be made interesting, instructive, and profitable. My observation and experience is that societies languish and die because of the negligence of members to discharge the duties assigned them. If we had a hundred and nineteen county organizations all thoroughly organized and in working order, all living and active, up to the Code of our ethics, all emulous of excelling in the thoroughness of their work, all anxious to perfect themselves for their professional duties, a thousand additional lights would illumine our pathway in the treatment of diseases; the death-rate would be shortened, and human suffering would be greatly diminished. By such an effort it would come to pass that in a short time all worthy medical men would unite with our societies, not only for instruction and enlightenment, but they would be impelled by the force of public opinion; for let us once convince the people that the true aims and objects of these associations are to better its members for their

professional duties, be assured they would give us all the aid and encouragement in their power. We could exercise an influence upon legislation. The appeal of this united profession, acting in concert for the redress of grievances, for the protection and promotion of the public health, could not be successfully resisted.

I have long been an humble laborer in your ranks, and, when an opportunity afforded, been connected with medical associations. I have observed by working, I have participated in the exercises, and have enjoyed their benefits. I feel that I ought to be able to give an opinion which should be entitled to some weight in regard to their usefulness; this I have endeavored to do in what I have already said.

HODGENVILLE, KY.

TEETHING IN INFANTS.*

BY R. B. GILBERT, M. D.

Professor Diseases of Children, Medical Department University of Louisville; Visiting Physician to the Obstetric and Children's Ward, Louisville City Hospital.

The midsummer season is now upon us, and with it comes the annually recurring scourge of infant life, the so-called "summer diarrhea," which in a city population is the cause of a great number of deaths among infants. The high rate of mortality from infantile diarrhea stands to-day as a reproach to medical science, notwithstanding the great achievements of our profession of which we love to boast.

The causes of infantile diarrhea, directly and indirectly, are somewhat numerous, and some of them as yet are not fully understood. The subject, however, is too wide in its scope to be disposed of in the short time allotted to me on this occasion. I will, therefore, discuss only one of the conditions that are popularly believed to be factors in the causation of diarrhea among infants, namely, dentition. I say "popularly believed," because it is the almost universal opinion among the laity, and there are quite a respectable number of medical men who still believe that teething causes diarrhea.

A prominent Louisville doctor is the author of a book, the title of which is, "You and Your Doctor," published last year, in which I find this sentence: "Teething is a very dangerous condition for the infant, especially if it occurs in the summertime." The doctor seems not to remember that it requires the first two and a half years of the infant's

* Read before the Brashear Medical Society, at Taylorsville, Ky., July 16, 1901.

life to complete the "cutting" of the first set of teeth. So the infant is compelled to pass through two summertimes while he is teething. Indeed, a great part of teething is accomplished before the child is born.

Not only diarrhea, but nearly all the diseases of infancy have been ascribed to teething. We often meet intelligent physicians who will laboriously work out the most improbable relations of teething and disease. The theory of "reflex action," and nerve irritation, which was so popular a few years ago, has doubtless done much to keep alive the old-world superstition about the relation of teething to disease.

This convenient and superficial theory of the dependence of infantile diseases on the process of dentition is now exploded. But superstitions are difficult to kill, in pathological as well as in theological beliefs. They linger on to haunt the members of each new generation as they grow up, notwithstanding they may have been long since exploded and rejected by careful investigators as unworthy the common good sense of a community.

So it is with "teething." The young practitioner, often perplexed by the intricacies and difficulties of infantile disorders, unable to make a diagnosis, is led, as it were, to the top of some high mountain and made to survey the wide realm of infantile pathology, the various forms and degrees of suffering to which the young are subject, and he is made to feel that all this domain can at once be made over to him if he will fall down and worship this demon called "teething."

A young physician from one of the interior counties of Kentucky brought his baby to my office one hot day last summer for advice and assistance in treating a very troublesome diarrhea, which he seriously thought was almost necessarily fatal because the baby was teething, and that he supposed to be the cause of the trouble. I immediately irrigated the little patient's colon with a pint of normal salt solution, which washed out three cherries, two pieces of pie-plant, and a quantity of greenish milk curds and mucus. Even after this ocular demonstration of the real cause of the intestinal irritation, the doctor gravely shook his head and still maintained that "the teeth must have something to do with it."

An intelligent and educated lady brought her one-year-old infant to my office a few days ago with a severe diarrhea. On asking her what caused the disease, she promptly replied, "It was caused by teething, as you can plainly see four teeth just peeping through." I asked her

to name the things she had given the baby to eat within the past twenty-four hours, and this is the list as I actually jotted down on a piece of paper: Six ounces of cow's milk every three hours, five cents' worth sponge-cake, three sticks peppermint candy, one saucer of oat-meal, and a half teacupful whisky-toddy. Besides, she had the baby dressed in yarn stockings and flannel skirts, fearing, as she said, "it might take cold while teething so hard." The thermometer was then standing at 90° F.

The laity are in a measure excusable for their belief in the "teething theory," since they hear it from the lips of the doctors so often.

No doubt the popularity of this doctrine depends partly on its saving a world of trouble to the doctor, and on its meeting also the views of the parents. Everybody likes to have things made clear, and if the doctor triumphantly points out the evils of the growing teeth, he satisfies the parents and the nurses, and they in turn laud the doctor's wisdom. Many a teething infant has been allowed to go on to a hopeless extent with a diarrhea which the parents thought was due to teething, and it must therefore be let alone. A better name for teething with such people would be "diagnosis made easy."

As the development of the teeth is a purely physiological process, it should be excluded from the domain of pathology. To ascribe diarrhea or any other disease to dentition is a reflection on the wisdom of nature, for the whole process is a natural development. The intelligent, painstaking doctor can always find out what is causing diarrhea if he will resolutely determine to thoroughly investigate the dietary and the alimentary canal. Let us teach the people when speaking of the causes of diarrhea to use the word "stuffing" instead of "teething," for nine tenths of infantile diarrhea is due to faulty feeding, both of quantity and quality.

The preparatory processes for the development of the teeth begin about the ninth week of fetal life; the epithelium within the mouth is thickened, forms a ridge, and at the same time dips into the embryonic tissue about to form the jaw. This epithelial process is called the enamel germ; it grows so as to surround a flask-shaped cavity, which it lines. Partitions develop into this cavity, thus forming ten cavities in each jaw, in which the development of the teeth goes on throughout the remainder of fetal life, so that the infant comes into the world with all its temporary teeth fully formed within the jaws. At birth the teeth are still covered over by the submucous coat and

the mucous-membrane, and the alveolus is much wider than is necessary to allow the tooth to pass through. There can, therefore, be little or no obstruction to the growth of the on-coming tooth.

The first teeth are twenty in number, and the ages at which they appear are approximately as follows: Central incisors, seventh month; lateral incisors, ninth month; anterior molars, twelfth month; canines, eighteenth month; posterior molars, twenty-fourth month. It will be borne in mind that there are many conditions that will modify the process of dentition. Certain diseases, especially rickets, exert well-marked retarding influences, and the development of the teeth may be modified by heredity, nationality, climate, etc.

In healthy children teething goes on without producing symptoms of any sort. The most pernicious doctrine that exists is the one that intestinal disease is due to teeth.

There is no evidence to show that bowel lesions are produced by teething. Some have claimed that teething *per se* does not make children sick, but that it predisposes them to illness. But it is a difficult theory to establish, and from what we know at present must be denied absolutely.

If diarrhea occurs during the period of dentition it must be looked upon as a concomitant with teething, and not caused by it. In this connection we should remember that during the first two years of infant life there is a rapid physiological development going on in the mucous membrane of the alimentary canal. I refer to the development and modification of the gastro-intestinal glands and follicles, a natural process, but, nevertheless, attended by hyperemia and hyperesthesia of the mucous membrane. This makes the membrane sensitive and easily irritated and inflamed by irritating substances, such as sour milk, fruits, etc., often fed to infants about weaning time.

There is no treatment for teething, as it requires none. Gum lancing and gum scarifying are looked upon by many as specific methods of treating ailments occurring during dentition. I have never yet seen any benefit derived by the operation, and, to say the least, it is cruel and irrational. Besides, there are dangers surrounding it. A lanced gum is an open wound, and as the mouth is a favorite hiding-place for various pathogenic microbes, the danger of infection is materially enhanced. An incision made over the crown of the tooth does not allow the tooth to "pop out," but the wound usually heals promptly, thus leaving a cicatricial band over the site of the tooth which may retard its progress.

In conclusion, allow me to suggest that we should carefully instruct every mother and nurse along these lines. They should be made to understand positively that teething is in no sense whatever a factor in the causation of diarrhea, nor of any other disease. The mothers and nurses being aware of this fact, will, when the baby gets sick, promptly seek the advice of the doctor, and thus much suffering and possibly many lives may be saved.

If by calling attention anew to this time-honored and homely subject some have been set to thinking (and perchance there may be some even here who still believe the "teething" theory), and by thinking of and discussing the subject they may be converted, and will henceforth, when speaking of the etiology of infantile diarrhea, rigidly exclude "teething," we shall feel at least that some good has been achieved.

LOUISVILLE.

THE DIAGNOSIS AND TREATMENT OF TYPHOID FEVER.*

BY S. L. REID, M. D.

The subject of typhoid fever is an old one, and in these days it is hard to express an idea that has not already received careful study from a painstaking physician. We are all familiar with the symptoms of a typical case of typhoid fever, and I will not take time to enumerate them, but will confine my remarks to the mild or irregular type of typhoid fever, and the diseases with which it may easily be confounded. The onset of the mild or irregular type of typhoid fever is very slow and ill-defined. The patient complains of nothing more particular than an uneasy, unsettled feeling, a slight, dull headache, such as would be caused by a temporary constipation, which usually exists, although a diarrhea is frequently present. The patient may probably apply for treatment for these conditions, and not being able to give a very clear history, we apply treatment for the effect, never suspecting the cause until the continuance of the symptoms forces us to investigate more closely. In no case is an early positive diagnosis possible before the end of the first week, unless it be made by "Widal's blood test."

Acute tuberculosis is attended by many of what are supposed to be characteristic symptoms of typhoid fever: Fever of a remittent

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type, evening exacerbations, morning remissions, delirium, dry, brown tongue, great prostration, rapid emaciation, abdominal tenderness, tympanitis, etc. On three different occasions at a prominent hospital in Louisville a post-mortem disclosed the fact that acute tuberculosis, and not typhoid fever, was the cause of death; the diagnosis having been made by a diagnostician of national repute. In the early stage of this disease the temperature reaches 106° or 107° , while in typhoid fever it seldom reaches 106° , and then only after the second week. Quinine will reduce the temperature in typhoid fever three or four degrees; in acute tuberculosis it has little influence. Consolidation in acute tuberculosis is at the apex of the lung, in typhoid fever at the base. In doubtful cases the family history, surroundings, prevalence of typhoid fever, etc., become important points in diagnosis; in pyemia and septicemia, the jaundiced hue of the body, absence of lenticular spots, and irregular exacerbations and remissions of temperature. The temperature ranges higher from the first, and continues so throughout the entire course of the disease. Early in the disease there are recurring chills followed by profuse sweating, delirium, subsultus, tympanitis, diarrhea, extreme prostration, and rapid emaciation. In typhoid fever these symptoms come on late. The presence of thrombi, infarctions, and multiple abscesses establish the diagnosis in pyemia.

There occasionally occur cases of septic poisoning, caused by the introduction of septic material into the system through drinking-water, that so closely resemble typhoid fever that the presence or absence of the rose-colored spots is the only distinguishing feature. The pneumonia which complicates typhoid fever comes on late in the disease, and is preceded by the regular history of typhoid fever, and can therefore easily be distinguished from the pneumonia that has typhoid symptoms from the beginning, except in cases over sixty years of age not seen until the second or third week, when it will be difficult to decide whether the pneumonia complicates the typhoid, or *vice versa*.

Gastric enteritis in an adult is easily distinguished from typhoid fever; diarrhea and vomiting precede the rise in temperature, which is irregular, and rarely goes above 103° . In a child up to six years of age the diagnosis can not readily be made unless seen from the first. If not seen until the second week, diagnosis is impossible.

I have for the last comparison a fever that is more often confounded with typhoid than any other, namely, remittent fever. This should

not be so, as true remittent fever is ushered in with a chill, and with the chill there is the most intense headache, and pain in the back and limbs. There is an immediate rise in temperature, and it may reach 105° or 106° in twelve hours from time of commencement, which is not the case in typhoid. If seen at the onset of the disease no trouble should be had in distinguishing the two, as the wide difference in the range of temperature and the distinct remissions that occur in remittent fever are sufficient to make the difference plain; also the gastric symptoms are much more exaggerated. If not seen, however, until the third week, and the remissions are slight or absent, the absence of the rose-colored spots along with the previous history of the case should be sufficient to establish the diagnosis.

In the treatment of typhoid fever pet formulas have no place, as each case is a law unto itself. Such being the case, I will merely outline my manner of treatment, adapting it to each case as the conditions seem to warrant.

As this is a disease of the intestinal tract, our first duty is plain: clear the bowel of all offending material, and keep it clear. We can do this with calomel and castor oil, and we may know when it is done by the discharges losing their characteristic foul odor. After this is accomplished I keep the actions alkaline by the free administration of the sulpho-carbolates. If there is a tendency to constipation, I secure one full movement in each twenty-four hours with calomel or oil, as indicated. The temperature may be controlled by sponge-baths or a combination of phenacetine, salol, acetanilid, and citrated caffeine. The tendency to heart-failure may be overcome by the free administration of sulphate of strychnia. If renal insufficiency be apparent, full doses of freshly made infusion of digitalis is usually all that is necessary. If the history of the case leads us to expect hemorrhage, we can discount it by the administration of gallic or tannic acid, or any drug that will increase the coagulability of the blood, commencing at the beginning of the third week. If active hemorrhage be present, hypodermic injection of ergot and morphine usually suffice. The blood lost may be replaced by "normal salt solution" by rectal injection or infiltration, as indicated. Food should be withheld the first ten days at least, and if given after that time should be in the form of soups, well strained, if there be any signs of heart-failure, which we can recognize by a difficulty in distinguishing the first and second sound of the heart. But if the patient's condition is

good, solid food may be cautiously administered when the temperature remains below 103°. If perforation occurs, the services of a surgeon are required. If none can be secured, you have two alternatives left: let the patient die, or operate yourself. Always remember that 26 per cent of cases after operation recover; without operation all die. We are, therefore, justified in giving our patient a fighting chance for life.

ELK CREEK, KY.

ERGOT IN OBSTETRICS.*

BY HUGH D. RODMAN, M. D.

There has been a great deal of discussion of late years on the use of ergot in labor, many of our best practitioners declaring in very positive terms that ergot should not be given in labor at all until after the child is expelled from the uterus. There are others who give it from the very onset or beginning of labor. Both of these positions are erroneous; both of them are extreme positions, and, in my judgment, both should be avoided as we would avoid any error. The first of these positions, if properly adhered to, permits harm, and the second does harm, hence they should not be practiced.

Ergot was used in labor by the peasantry of some parts of Europe as long as three hundred years ago, and it is mentioned in this connection by writers in the sixteenth and seventeenth centuries, but its introduction into use in modern medicine seems to be due to the labors of Dr. Stearns, of New York, in the early part of the last century.

In a paper of this nature, and also on account of the great amount of controversy, and owing to its great sphere of usefulness, I will not attempt to discuss the physiological action of ergot. At present there seems to be scarcely any view of its action which is accepted by all practitioners. This I believe to be owing to the variable conditions and strength of the drug itself. I said that those who refuse to give ergot at all in labor do harm by permitting many labors to linger for many hours, when, by the judicious use of ergot, they can be speedily and safely terminated. A number of the authors who wrote on obstetrics during the last century admit that its use is proper, and others advocate it.

Miller's System of Obstetrics (1858), page 467: "Insufficient action of the uterus: This condition is indicated by the feebleness or irregu-

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larity of the pains, and the little or no effect produced by them in advancing the child, notwithstanding the absence of any assignable obstacle, the presentation being favorable and the parts in a healthy state. It may be the continuance of a corresponding condition that had existed in the first stage, or it may manifest itself in the second, although the first may not have been particularly protracted." In the treatment of this condition, after mentioning other remedies, he says: "But the remedy most usually resorted to for this purpose is the *secale cornutum*, or ergot, administered and repeated once or twice, if need be, at intervals of twenty or thirty minutes; it seldom fails to excite powerful uterine contractions, which promptly expel the child if all the requisites for any easy delivery exist, namely, if the os uteri be dilated, the vagina and vulva relaxed and moist, the presentation natural or such as to offer no great impediment to the birth of the child."

Ramsbotham's *Process of Parturition*, 1847, after describing and giving the causes for a lingering labor, says: "Under these circumstances it becomes our duty to endeavor, if possible, to rouse the uterine energies, by doing which we may probably prevent the necessity for instrumental delivery. This object we can sometimes easily effect. The pains may be augmented both in frequency and strength, and may even occasionally be restored after they have been suspended for many hours. Almost the only medicine now in use as a uterine excitant is the ergot of rye, and I have no hesitation in declaring my opinion that its action is specific."

Playfair, in his *System of Midwifery* (1878), says: "Still a large number of causes will arise in which the absence of all removable causes has been ascertained, and in which the pains are feeble and ineffective. The fault being the want of sufficient contraction, the first indication is to increase the force of the pains. Here the so-called oxytocic remedies come into action, and although a large number of these have been used from time to time, such as borax, cinnamon, and galvanism, practically the only one in which any reliance is now placed is the ergot of rye. This has long been the favorite remedy for deficient uterine action."

Many other of the older authors either advocate the use of ergot or approve of its use in all lingering labors where the conditions are such as to admit of a speedy delivery. Some even go further and advise its use in all slow labors. This latter course I positively condemn. I do most earnestly advocate the use of ergot in all lingering labors (except

primipara) where there is a soft, well dilated or easily dilatable os and vagina, with soft and pliant external genitals, and all the parts in good condition to admit of a speedy delivery, and with a head presenting and nothing necessary to terminate the woman's agony except active expulsive pains. When I meet this kind of case, which I do in at least one half of all my labor cases, I feel that I would not do my duty to my patient, I feel that I would be guilty of neglect, would be false to the charge entrusted to me, yea, would even do violence both to the mother and the forthcoming child if I did not give ergot. I am so fully convinced after a long experience and bedside observation of twenty-five years that this course is the proper one for me to pursue that I give but little heed to an opposing opinion, holding as I do that my own close observation is worth more to me than the views of any one. I can say with a clear conscience that since I have used ergot in this way my per cent of stillborn children has decreased at least one half, and that a stillborn baby is now a rare thing with me. I believe that in former years I have sat idly by waiting for nature, or only assisting her by the use of a cup of hot tea or by walking the patient about the room, or such other domestic practices as were suggested by the nurse, until the baby died before nature could do her work, whereas if I had given ergot I would have saved the mother many hours of suffering, both mentally and physically, and perhaps saved the baby's life, which is far more important than all else.

I will now give you a condensed report of a number of cases, which were treated both with and without ergot:

CASE 1. Mrs. J. C., age forty-two; mother of eight children. Was fifteen hours in labor, with light and inefficient pains. No ergot used; child born feeble, and died in one hour after birth.

CASE 2. Mrs. F. B. R., age forty-three; mother of six children. Parts all soft and dilatable; pains were feeble and inefficient. Labor lingered all day—twelve hours; child born feeble but rallied and lived, although large, weighing ten pounds. No ergot given.

CASE 3. Mrs. J. B. C., age twenty-four; mother of one child, and had had two miscarriages; child born at 12.55 A. M. December 20, 1891. The mother was taken in labor about twenty-four hours previous. Up to and for a few hours after this time the fetal movements had been regular and strong. These light pains lasted only for a few hours and ceased, and soon the fetal movements ceased; in about eighteen hours pains returned feebly, and at 11.45 P. M., or 70 minutes before the child

was delivered, ergot was given. The child was large; no discoloration and no signs of ergotism, but was dead; the liquor amnii was thick and purulent. I believe that if ergot had been given in the early hours of this labor the child would have been saved, as it was evident the child died during this long period of waiting.

CASE 4. Mrs. F. K., age twenty-six; mother of three children. Labor lingering; pains light and far apart until one dr. ergot was given, and in one hour and ten minutes the baby was born.

CASE 5. Mrs. C. C. T., age thirty-six; mother of eight children; was small and delicate. When I arrived she was having light pains and was very hysterical; begged for arsenic or strychnia with which to kill herself. But instead, after finding the parts in good condition, I gave her ergot, and was rewarded by the delivery of a healthy child in one hour and a half. Mother made a good and rapid recovery.

CASE 6. G. G., age forty-three; mother of thirteen children and had two miscarriages. In this case the membranes ruptured and waters escaped twenty-five hours before delivery. I was called about four hours before delivery and found water all escaped and slight bleeding going on from the uterus, the os of which was soft and easily dilated. Patient in great agony, both of mind and body, as she was largely swelled all over. For two hours I tried the usual domestic means to restore pains but failed, and gave ergot, and in an hour and forty or fifty minutes the case was ended by the expulsion of a large, healthy child.

CASE 7. Mrs. B. R. Y., age forty-six; twelfth labor. When I saw this patient she was having light, short pains; os well dilated; all her genitals were in good condition for a speedy delivery. I waited three hours and had no improvement in the pains. I gave ergot, and repeated it in one hour, and at the end of the second hour from the first dose the child was born, strong and healthy.

CASE 8. Mrs. M. J. N., age twenty-one; mother of two children. On my arrival at 10.30 I found the patient with feeble and infrequent pains; os well dilated. I gave ergot at 11.50 and repeated it at 12.40. At 2 o'clock the baby was born, and in good condition.

I believe it useless to multiply these reports of cases. I will state that I now give ergot in 75 per cent of my labor cases in multipara, varying in time from fifteen minutes to six hours before the birth of the child, and have had no bad results. I have not had a stillborn child where the mother had ergot in the last ten years.

Reports of Societies.

THE MULDRAUGH HILL MEDICAL SOCIETY.

Stated Meeting, August 8, 1901, the President, Dr. T. B. Greenley, in the Chair.

The following were elected: Dr. S. N. Willis, Hardin County; Dr. J. T. Green, Grayson County; Dr. C. J. Walton, Hart County; Dr. A. D. Willmoth, Jefferson County; Dr. R. C. McChord, Marion County; Dr. Barnett, Bullitt County.

Dr. Bowen reported a case of a young man who was moral and no specific history, who complained of no appetite, anasarca, muscles flabby, toe drops, dragging of feet, red blood corpuscles very much diminished, bowels constipated, pulse 96, temperature 100°, sensation lost in lower part of body. Diagnosis: Multiple neuritis, with mercury to move bowels, followed by A. B. S. pills, for he regarded it as due to "an infection," which was also the opinion of Dr. Curran Pope, who saw the case. In addition to the above treatment he was placed on baths, massage, and electricity, and was better.

Dr. Aud reported case due to drinking large amount of whisky by negro boy, and after having convulsions for days then followed by multiple neuritis.

Dr. Cole, of Millerstown, read a report of a case of "Stab Wound of Chest, followed by Pneumonia."

In discussion of Dr. Cole's paper Dr. Aud thought blood-clot present, and probably pus, and advised aspiration and administration of syrup of hydriodic acid, chloride ammonia, mercury, and arsenic.

Dr. Green thought the trouble septic, and suggested iodide, ammonia, and salt baths with towels wrung from salt solution.

Dr. Carpenter's paper on Surgical Election in Conservative Obstetrics, Abdominal and Pelvic Surgery was read, but most remarks were on repair of perineum, and urged against too frequent use of forceps to relieve anxiety of friends, and urged the examination of retina of primipara and carefully watching her before labor comes on.

Dr. Smith thought less tears would occur if more time was to pass during labor.

Dr. Bowen thinks ergot and forceps more often cause tears, and that immediate repair one of election.

Dr. Gaddie agrees with essayist as to performing craniotomy on living child to gratify anxiety of friends, and thought it should never be done, and people should be educated along that line.

Dr. McCormack thought shoulders cause most tears, and spoke of different ways of removing stitches from perineum.

Dr. Aud thinks every doctor should talk more morals to his patients, and said there were two duties in case of labor—one to family and the other to the physician—and that a good fee should be charged, and that craniotomy should never be done on a living child.

Dr. Pflugst's paper on Epistaxis was enjoyed by all, and was discussed by the following physicians:

Dr. Aud said he never saw a case he could not control, and reported a case in a boy who was a bleeder, and who, after plugging the nose, bit the string in two and caused trouble in removing plugs.

Dr. Mobley reported case in typhoid patient where, in absence of any thing else to plug with, he tied a knot in a narrow bandage at the end to give a starting point and tamponed nose with this.

Dr. O'Connor spoke of how patient and friends became alarmed, making it very hard to do any thing, and said in one case where peroxide of hydrogen failed he used two cone-shaped pieces of fat bacon to plug nares, and thought the case due to taking "swamp-root" for specific trouble.

Dr. Carpenter said nasal surgery has been woefully neglected, and that where the septum was injured by blow and hemorrhage from it, an intubation-tube could be used to put it in place, and plug-strings should be left long enough to facilitate removal of plugs.

Dr. Pflugst, in closing, spoke of asepticising nasal chambers, and said plug should only remain in twelve hours, and that in recurring hemorrhage silver nitrate should be used.

In discussion of Dr. Smith's paper on "Better Organization of the Medical Profession in the State," Dr. McCormack said the reason doctors did not get more consideration was that they did not look close enough after their legislators, and did not talk enough medicine to their patients.

D. C. BOWEN, M. D., *Secretary pro tem.*

THE BRASHEAR MEDICAL SOCIETY.

Quarterly Meeting, Held at Taylorsville, Ky., July 16, 1901.

Brashear Medical Society met in quarterly session at the courthouse at Taylorsville, July 16, 1901. Quite a large crowd of members were present, and the meeting was called to order and the business entered into with much spirit by all present. A speech was made by Secretary Wiley Rogers, of that place, welcoming the visitors and extending thanks for their presence at the meeting, in the following well-chosen words:

Gentlemen of Brashear Medical Society: In behalf of the medical profession, pharmacists, and the citizens of Taylorsville I greet you with a hearty welcome, and I trust that your session on this occasion will redound to lasting good. We appreciate the courtesy at this time, for it recalls to our minds that a few medical men of Nelson, Spencer, and Washington counties met at Bloomfield two years ago to formulate a plan and organize a medical society. So rapidly has been its growth that the doors have been thrown wide open to receive all medical men of good standing from far and near who wish to meet with us and discuss questions for the advancement of the medical profession. We also appreciate very highly the fact that you are with us to-day, and now that you are with us, we are with you. We will strive to aid and assist as much as possible the great cause that you are assembled here to advance. We are working and will continue the work in this section until every medical man of proper professional standing has joined the society. Your presence at this time will certainly stimulate that cause and will help us greatly.

The longer I live the more I am impressed with the truth that there is no labor for the individual and none for an association of men that is simply selfish when it rises to the dignity of saving human life; such, my friends, is your administration to the comfort and to the necessities of mankind; such is the labor in which you are engaged, trying to alleviate human suffering. Then, why should you not be welcome to Taylorsville and welcome to the heart of humanity everywhere?

The following papers were then read and discussed by the members:

Teething in Infants—Dr. R. B. Gilbert, Louisville.

Diagnosis and Treatment of Typhoid Fever—Dr. S. L. Reid, Elk Creek.

The Use of Ergot in Obstetrics—Dr. Hugh D. Rodman, Bardstown.

Vomiting in Pregnancy—Dr. J. B. R. Cooper, Samuels.

Dr. Shepherd reported a case of injury of the leg, in which the soft parts were laid open to the bone, and in which the periosteum was involved.

The visitors were hospitably entertained by the members of this place at the Spencer House. Five new members were admitted to the society—Drs. Reid, Conrad, Young, Long, and Mathis.

The next quarterly meeting will be held at Bloomfield, on Tuesday, October 15th.

Tuesday was the second anniversary of the organization of the society. On July 20, 1899, the society was organized at Bloomfield, and was called the Tri-County Medical Society, composing the counties of Spencer, Nelson, and Washington, and included a membership of seven. Dr. Wiley Rogers, of Taylorsville, was elected secretary, and has served in that capacity since. On motion of Dr. A. G. Blincoe at their meeting January 8, 1900, the name was changed to the Brashear Medical Society, in honor of Dr. Walter Brashear, who performed successfully the first hip-joint amputation in the history of the fraternity. The doors were then opened to all physicians in proper standing, and the membership has constantly increased, now numbering about forty.

THE INCREASING STERILITY OF AMERICAN WOMEN.*

BY GEO. J. ENGELMANN, M. D.

This investigation is based upon numbers which may seem small to admit of deductions as to conditions existing throughout a great country, but I feel justified in doing so, as the data are exact and cases are carefully sifted; in addition, many details are corroborated to a decimal by independent observers in far distant points: by Dr. Wilbur in the census of Michigan, and Drs. Abbott and Kuszynski in that of Massachusetts; by the careful observations of Dr. Chadwick in Boston, and for the eighteenth century by town records from Massachusetts communities. Certain data are taken from each, as no one investigation covers all the points I have developed, and some have never before been presented, so that no record for comparison exists; all are indirectly corroborated by correlated facts. Whatever view may be thought of the results obtained, the data presented certainly suffice

* Abstract of paper read at St. Paul before Gynecological Section, American Medical Association, 1901.

to indicate the imperative need for further and more extended investigation in this direction.

The sterility of woman has increased, hand in hand with the much-discussed decrease of fecundity, everywhere to some extent, but in the United States to an excessive degree, as fecundity has diminished more rapidly than in other countries: from a sterility of two per cent in the eighteenth century and a fecundity of five children to the marriage, conditions better than in any other country, and such as led to the Malthusian theory of super-fecundation, to the fear of overpopulating of the earth's surface, after a lapse of one century, from first we have passed to last, and the other extreme is now presented: sterility greater and fecundity less than that of the women of any other nation, unless it be of France, who for this reason must yield her proud position of one-time supremacy and retrograde to the rank of a second-class power.

Among the laboring class in St. Louis, 21 per cent of all marriages are sterile, 24 per cent among the higher classes, of foreigners only 17 per cent; throughout the State of Massachusetts, Americans 20.2 per cent, foreigners 13.3 per cent, and in the city of Boston nearly 25 per cent. Among the laboring class, American born, the fecundity in the eighteenth century, five children to all marriages, at the beginning of the nineteenth century, 4.5 is now and was at the end of that century, 1.8 to 2.1; 2.1 in Missouri, 1.8 in Michigan, 1.8 in Boston, somewhat more among American-born of foreign percentage, much more among foreigners; among the Irish, 4.2 in St. Louis, 3.5 in Boston, 5 in Michigan; among the Germans, 3.4 in St. Louis, 6 in Michigan, and in Massachusetts for all foreigners 4.9 children to the marriage. Fecundity is somewhat less among the native American, also among the higher classes, least of all among college graduates, 1.6 children to the married couple, in England 1.5, while for the population at large it is 4.2.

I have called attention to the frequency of miscarriage and divorce as concomitants and causes of sterility, mainly to emphasize that barrenness is not altogether due to physical causes, to pelvic disease amenable to local treatment, and that sterility is but too often the result of moral causes or the sequence to intentional miscarriage and the methods which precede it, the prevention of conception, both of which competent investigators have shown to be far too frequent: Divorce in Canada, 1 to 63,000 marriages; in England, 1 to 11,600; in Germany, 1 to 13,000; in France, 1 to 12,500; in all United States, 1 to 185; Massachusetts, 1 to 18.8; Rhode Island, 1 to 8.2 marriages.

Miscarriages are found in the proportion of 1 to 2.8 labors at term among Americans; 1 to 5.5 is the usually accepted standard; among Americans of American parentage the frequency is somewhat greater, 1 to 2.7, among American born of foreign parentage somewhat less, both in St. Louis and Boston, 1 to 3 among negroes, worse.

There is an absolute and primary barrenness due to utero-ovarian disease, mainly to atresia, gonorrhea, and to endometritis, with acrid discharge destructive to the spermatozoa. This is here for the first time clearly distinguished from relative or secondary sterility, that is, conception and miscarriages; this primary sterility is much less frequent, 12 per cent among Americans, 10 to 11 per cent among foreigners, which, of course, means relative sterility for Americans, 9 to 12 per cent, for foreigners, 3 to 6 per cent; showing that among American-born there is a much greater proportion of sterility, of childlessness due to abortion; this may be due to disease or traumatism, accidental more often; authorities say not much of the barrenness of woman is intentional. All sterility was in the American colonies, 2 per cent; in parts of Russia to-day, 2.6 per cent; in Norway, 2.5 per cent; hence primary barrenness can certainly in this country not be over 3 per cent; my records show 9 per cent; 8 per cent of 20.23 per cent of the childless.

Even in absolutely primarily barren marriages sterility is once in four or five cases due to the male, showing that absolute primary sterility in woman is not common, and that sterility is not mainly due to utero-ovarian disease is evident from its rapid increase, hand in hand with the astounding progress of gynecological science, which we have every reason to believe would reduce the number of childless women to a minimum were sterility referable to tangible physical causes.

Sterility is a sad affliction for the innocent sufferers, and for her our best efforts must be exerted; but if so rarely due to pelvic malformation and disease, why do I present these thoughts to the gynecological section of a medical society? It is because we must seek to stay the progress of this abnormal state—because men and women are in ignorance of the suffering prone to follow wilful and self-inflicted sterility, and it is this subject which claims a prominent chapter in the gynecology of the future—in preventive gynecology.

The death-rate of nations has steadily decreased in the last decade by the development of preventive medicine, and so may sterility decrease and birth-rate increase with the progress of preventive gynecology.

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SHUT YOUR MOUTH.

Some years ago a distinguished physician in the United States Army, who had been stationed in the West among the Indians, was much struck with the persistency with which certain tribes of the red men kept their mouths shut; even the young infants were compelled to keep their mouths closed. He persisted in this study, and finally wrote a book upon the subject of keeping the mouth closed, the title of which was "Shut Your Mouth." With our present knowledge of the manner in which phthisis and other diseases are communicated, it would be wise to follow the advice of Dr. Catlin, the author of this book. We think there can be no doubt that a great majority of cases of acquired phthisis are contracted by the inhalation of the germ, as it is well known that this is one of the chief modes of acquiring the disease. It is transmitted through the medium of the air, and, once reaching a suitable spot, begins its deadly work; hence the advice to keep the mouth shut if you would avoid phthisis is certainly good advice. We remember some years since while riding on a street car with the late Dr. E. R. Palmer, he suddenly got up and walked to the rear platform. Some one asked him why he did so, and he remarked that the car was full of the germs of consumption, and he did not care to inhale them. There was much wisdom in his suggestion, although we did not know

as much concerning the behavior of tubercle bacillus as we do to-day. We know that diphtheria affects children much more frequently than it does adults, and it is also a well-known fact that children keep their mouths open a great deal more than adults, as they are always talking and laughing, and are more likely to inhale the germs of diphtheria and phthisis than adults. It is also a noteworthy fact that the greatest number of people affected with phthisis are children and young adults, and there can be no question but that the ordinary follicular tonsillitis can be contracted by inhaling the breath of the person so affected.

The effect of the facial expression depends largely upon the condition of the mouth. The mouth is intended to be closed except at the times when it is absolutely necessary for it to be open—that is, in eating, speaking, etc. Nothing detracts so much from a person, young or old, as an open mouth. It makes him look unsightly and awkward. The habit of keeping the mouth open continually finally results in a general distortion of the features. The wrinkled face and sagging jaw are largely due to the habit of keeping the mouth open.

Current Surgical and Medical Selections.

TREATMENT OF DYSENTERY.—Wilfrid Watkins-Pitchford (British Medical Journal), from experience in South African hospitals, concludes that in the later stages of dysentery, in which his cases were received, salines and ipecac are of very little benefit. Perchlorid of mercury, bismuth, and opium gave some relief, but the greatest benefit was derived from a mixture of bismuth, chlorodyn, and “izal.” His formula follows: R Izal m. iij, bismuth subnit. gr. x, tr. chloroformi et morphini m. viii, mucilaginis acaciæ ad. 3j. To be taken every two, four, or eight hours, according to the severity of the symptoms. His experience shows that milk is not a suitable diet, pieces of casein stained with bile being found at autopsy as low down as the lower third of the rectum. Bread and butter, taken with beef tea, was usually satisfying and well borne. He finds that enemata are not usually well borne, and are not free from danger of perforation, especially when combined with abdominal massage.—*The Chicago Clinic.*

THE LATER RESULTS OF THE OPERATIVE TREATMENT OF PROSTATIC HYPERTROPHY.—Von Frisch, of Vienna, discussed the relative merits of prostatectomy and of the galvano-caustic incision by the method introduced by Bottini. Legueu, of Paris, regarded the amelioration of the symptoms which followed upon double castration as uncertain, and as disproportionate

to the sacrifice of the testicles. The formation of a suprapubic fistula he regarded as the substitution of one infirmity for another; incontinence is the rule, and the bladder does not even empty itself completely. He regarded the procedures which attack the prostate directly as likely to be the treatment of the future. He objected to Bottini's operation as being one which is performed in the dark, and which is often followed by a relapse of the obstruction. Total prostatectomy by the perineal route, if performed early and before the occurrence of septic complications, is the procedure which affords the greatest prospect of permanent cure.—*The Edinburgh Medical Journal*.

COLLECTIVE INVESTIGATION OF THE INFLUENCE OF THE SILVER NITRATE INJECTIONS ON PHTHISIS.—In 1892 the undersigned began a collective investigation of the action of cold in the treatment of acute pneumonia, and there is reason for believing that this procedure, which resulted in gathering four hundred cases of this disease thus treated, with a death-rate not quite five per cent, was an important factor in calling attention to the utility of that treatment and in introducing it to the profession of this country. That research was based on the conviction that no remedy can be called truly successful until it has passed the exacting crucible of clinical experience, and it is now proposed to apply the same ordeal to the silver-injection treatment of phthisis, which, in a large hospital, dispensary, and private practice, reaching over a period of three years, and during which many thousand injections were administered, has given me greater satisfaction than any other method that I have ever employed. In keeping with the above expressed feeling a cordial invitation is herewith extended to those members of the profession who have the inclination and opportunity to investigate this method of treating phthisis, and to whom a reprint on the subject, with full information and blanks to report cases, will be cheerfully sent on application.

THOMAS J. MAYS, M. D.

1829 Spruce Street, Philadelphia, Pa.

PLEA FOR MORE EXTENSIVE OPERATING IN CANCER OF THE UTERUS. During the last two years Wertheim has been having many sections made of the glands and parametrium in every case of cancer of the uterus that came to operation, thirty-three in all. In eleven some of the glands in the region were found invaded by the carcinoma, including five in which the neoplasm had been supposed to be in its earliest stage; that is, in twenty-six cases of operable carcinoma of the cervix the glands were found involved in 20 per cent. In one case, a commencing canceroid of the portio, a cancerous gland about the size of a cherry was found close to the right external iliac vein. No traces of cancer could be discovered in any of the other glands, nor in the parametrium. In another case, a circumscribed nodule on the posterior lip of the portio vaginalis was accompanied by a cancerous gland the size of a hen's egg on the left external iliac vein. In the third case the cervix was entirely cancerous, and a cancerous gland was found

close to the right uterine vein. In the fourth the cervix was cancerous, and the parametrium and neighboring glands were normal, but at the point where the left ureter crosses the common iliac a cancerous gland the size of a cherry was found. In the fifth a narrow strip of cancerous tissue in the right parametrium led to a very large cancerous gland adherent to the external iliac vein. Cancerous fibers and nests were found several times in the parametrium, when to the eye and touch it seemed perfectly normal. Wertheim considers these findings important testimony to the necessity of extirpating the glands in the vicinity, and the parametrium in all cases. His technique includes exposing and liberating the uterus and the iliac blood-vessels. The glands are carefully sought for along the vessels and excised up to the fork of the abdominal aorta, and the parametrium and paravaginal cellular tissue are extirpated with the uterus and the upper portion of the vagina. Omitting light inoperable cases, he has had three die out of twenty-five patients operated on, one from invagination of the small intestine, the others from peritonitis. The remainder recovered, and have shown no signs of recurrence to date. The operation requires seventy-five to ninety minutes. The ureters are easily isolated unless fixed by inflammatory processes. The vessels are readily exposed. Hemostasis has to be applied to even the smallest ramification of the veins, and trained assistance is necessary. Provisory ligature of the hypogastric artery was of no appreciable benefit. The extirpation of the glands is difficult only when they are adherent to the vessels. In future, he remarks, it may be possible to restrict the extirpation to those glands which alone are tumefied, as in none of his sections were traces of carcinoma to be found in the normally small glands. The general health and the state of the heart should be carefully weighed before attempting intervention. If these are favorable, unexpectedly gratifying results may be attained.—*Wiener Klinische Wochenschrift*; *Journal of the A. M. A.*

PREGNANCY AND OVARIAN TUMORS. Richard Mond (*Munchener Med. Woch.*), from his own experience, and from a review of the literature on the subject of pregnancy and ovarian tumors, considers the following points as authorized:

1. Ovariectomy is the justifiable therapy as soon as an operable ovarian tumor has been diagnosticated during pregnancy. With the increasing size of the tumor there will be conditions favorable for firmer adhesions, thus complicating the removal; for this reason there should be laparotomy as soon as the diagnosis is certain.

2. According to present statistics, to obtain the best results for the mother the operation should be between the second and fourth months of pregnancy; for the continuance of pregnancy, between the third and fourth.

3. The dangerous complications resulting from delay, such as torsion of pedicle, suppuration of cyst, etc., demand immediate operation.

4. Puncture of cyst and artificial abortion are only makeshifts and not therapeutic measures. In dubious cases puncture is allowable, and, eventually, incision.

5. A growth of the tumor in pregnancy is observed in most cases.

6. If the pregnancy is far advanced when the patient is first seen, then also ovariectomy is indicated.

7. During labor even a reposition of the tumor under narcosis may be attempted. In case of small cystic tumors, puncture, or even incision, is indicated.

8. In case of a solid tumor and living fetus at the time of labor, Cæsarean section is indicated, with a removal of the obstruction to delivery.

9. After delivery we should wait one or two weeks before operating, until the question of puerperal infection is decided, and involution of the uterus far advanced.

10. During the puerperium an enlargement and growth of the tumor have been observed.—*The Chicago Clinic.*

ANTITOXIN TREATMENT OF TETANUS.—As a result of a careful study of this subject, Moschcowitz (*Annals of Surgery*) appends the following résumé to his paper :

All forms of tetanus are caused by the bacillus of Nicolaier; hence the diagnosis rheumatic or idiopathic should have no room in our nosology.

The tetanus toxins appear to have a distinct affinity for the anterior horns of the spinal cord, which may be distinctly recognized by Nissl's method of staining. The cerebro-spinal fluid of tetanus patients is more toxic than the blood.

The antitoxin therapy appears to have a distinct beneficial influence upon the course of tetanus.

With the antitoxin treatment the mortality percentage has been reduced from about ninety to forty per cent.

Although the use of the serum is a most important factor in the treatment of tetanus, the other recognized therapeutic measures should not be neglected.—*The Therapeutic Gazette.*

PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.—Robert Maguire (*The Lancet*). In this second lecture Maguire continues the subject of the prognosis of tuberculosis. Pyrexia, he thinks, is not so significant; it may be absent, and he does not consider that tubercular poisoning itself often produces pyrexia, but rather that it is due to staphylococcal and pneumococcal poisoning. An increased morning temperature, and the nearer the approach to evening temperature the worse the outlook for the patient. General weakening at the commencement of the attack greatly increases the gravity of the case. This is especially so if there is a cardiac or vasomotor weakness. Hemoptysis causes altogether too much alarm, especially in the early stages; it occurs from so many other causes that he

says: "I think one may say that hemoptysis alone is most frequently not caused by lung disease." Repeated small hemoptyses are often a relief to an over-congested pulmonary area, and a single large hemoptysis without fever is apparently of little importance, but if fever is present it should excite all attention. In the second stage, that of progress, a point that we should look out for is the presence of large bubbling râles indicating formation of cavities which may or may not be detected during life, indicating progress of the germ and extension of its action. Pyrexia alone is not a specially important symptom in these cases. Extension of the tubercular lesions of the lungs may take place in five ways, each of which is discussed: 1, By simple contiguity; 2, by lymphatic absorption; 3, by bronchial insufflation, a matter of greatest importance; 4, by venous conduction; 5, by arterial conduction. The lymphatic absorption undoubtedly plays a great part in the extension of contiguity, and it may be carried to remote parts of the body in this way. Bronchial insufflation is much more important, and the extension from the apex to the lower lobes is largely in this way. Venous and arterial conductions are, of course, important and more serious than some of the other methods. Tuberculosis of the larynx is never, he holds, an early condition; it is always produced by infection of the larynx through the excretion of the lungs. The same is true of infection of the bowels through swallowing of sputum; both, of course, are of the gravest prognosis. As regards symptoms, there are only two which greatly help in the prognosis in the second stage. They are pyrexia and hemoptysis. The former is always present; the higher the fever and more nearly the morning temperature approaches that of the evening the worse the prognosis; but still worse is the so-called hectic fever, where the sub-normal morning temperature is followed by an evening rise of perhaps even eight degrees. Maguire's experience shows that no drug has any effect on this symptom. Hemoptysis is much more serious in the second stage than in the first, inasmuch as it is more usually caused by ulceration of the blood-vessels. Its dangers are: 1, loss of blood; 2, shock; 3, fright. He has seen cases where this last caused the death. In the third stage we have signs of activity and consolidation, or loss of lung tissue, dyspnea, and hemoptysis, which last is a very serious matter. If copious, it is most frequently caused by rupture of an aneurism of the pulmonary artery in a cavity, and he warns against reckless percussion in this stage on account of the possible presence of these aneurisms.—*four. A. M. A.*

CARCINOMA OF BREAST.—Keith (*Lancet*) suggests as the three most important questions on this subject: Is it increasing? Is it hereditary? Is it curable? In regard to the first two he says there is at the present time too much ground for doubt to attempt an answer. The last, which is really the most important both to the surgeon and patient, he believes can be answered in the affirmative, but reports of "cure" given within three years after operation are not to be considered as a test of the per-

manency of the cure. He thinks the removal of the superficial fat of the breast is of equal if not greater importance in most cases than the removal of the pectoral muscles, this fat being ramified by the lymphatics of the breast.—*The Chicago Clinic*.

THE TREATMENT OF RACHITIC DEFORMITIES.—James K. Young (International Medical Magazine). The tendency of rickets is toward recovery with persistence of deformities. Whether or not such deformities are ever outgrown is somewhat of a disputed question. The writer has never witnessed an instance of such spontaneous recovery from deformities in city practice.

Although considered a medical disease, the numerous deformities give it a surgical character. This twofold aspect of rickets has sometimes led to serious blunders. Thus the writer knew of a case in which subperiosteal hemorrhage of the tibia was mistaken for sarcoma, and as a result of this mistaken diagnosis the leg was amputated.

The deformities caused by rickets include: coxa vara, knock-knee, bow-legs, and anterior bowing of the diaphysis.

Coxa vara requires subtrochanteric osteotomy, with subsequent correction of deformity and the wearing of a plaster-cast for six weeks.

Knock-knee necessitates a Macewen osteotomy above the knee-joint, with slight overcorrection of deformity, and perhaps the wearing of apparatus for a year to prevent return.

Bow-legs demands osteotomy or osteoclasis at the most prominent point of the bent femur or tibia and fibula. In very young children the bones may sometimes be straightened by the hands alone. Slight overcorrection is always necessary.

In anterior bowing of the tibia after fracture or division of the bone, the overriding of the fragments may be prevented by simply dividing the tendo-Achillis.

But if all these deformities are seen at an early stage of rickets, when they are not simply sequelæ, but represent the malady itself, they do not require operation, for orthopedic apparatus is then generally equal to the surgical exigencies of the disease.—*Archives of Pediatrics*.

ETIOLOGY OF TROPICAL DYSENTERY.—Simon Flexner (Bulletin of the Johns Hopkins Hospital), in the Middleton-Goldsmith Lecture, delivered before the New York Pathological Society, discusses the etiology of dysentery, and gives the results of original investigation in Manila by himself and Dr. L. F. Barker. After considering the various investigations upon the etiology of dysentery found in the literature, he draws the following conclusions therefrom:

1. No bacterial species yet described as the cause of dysentery has an especial claim to be regarded as the chief micro-organism concerned in the causation of the disease.

2. It is unlikely that any bacterial species that is constantly and normally present in the intestine or in the environs of man, except where the disease prevails in an endemic form, can be regarded as the probable cause of epidemic dysentery.

3. The relations of sporadic to epidemic dysentery are so remote that it is improbable that the two diseases are produced by the same organic cause.

4. The pathogenic action of the ameba coli in many cases of tropical and in certain examples of sporadic dysentery has not been disproved by the discovery of ameba in the normal intestine and in diseases other than dysentery. While amebæ are commonly present and are concerned in the production of the lesions in subacute and chronic dysentery, they have not thus far been shown to be equally connected with the acute dysenteries, even in the tropics. In the former varieties bacterial association probably has much influence upon the pathogenic powers of the amebæ.—*The Chicago Clinic.*

TUBERCULOSIS OF THE TESTICLE.—In a recent discussion before the Paris Surgical Society, M. Petit (*Journal of Tuberculosis*, January, 1900) speaks of the surgical treatment of tuberculosis of the testicle. Some operators believe in routine castration, but it must be said that a great uncertainty attends the whole question of operative interference in tubercular testes. While in some cases ablation of the lesions may, within close limits, arrest the progress of the one case, on the other hand it may accelerate that of another. It is undoubted that cure may follow castration, simple incision and disinfection, and even purely medical treatment has appeared to possess benefits. It is, however, certain that there is no form of interference that will guarantee a cure. Prognosis should be most guarded. Verneuil has formulated some very safe rules for guidance. In tuberculous affections where the skin of the scrotum is intact he advises non-interference, while in open, suppurating, fistulous, or fungating forms he applies the actual cautery. These two maxims are carried out by many of his pupils, and the results which they report compare favorably with those obtained by resection, castration, etc. Encapsulated tuberculosis is the only condition in which we are justified in making a radical operation.—*Bulletin Cleveland General Hospital.*

THE PREVENTION AND TREATMENT OF POST-PARTUM HEMORRHAGE. This subject was discussed at the recent meeting of the British Medical Association, the basis for the discussion being a paper contributed by Byers, of Belfast (*British Medical Journal*, 1900). It is stated that the average amount of blood lost in childbirth is about one pound. Clinically, however, no fixed amount can be taken as constituting hemorrhage, as each patient differs in this respect from others. The obstetrician must expect that post-

partum hemorrhage may occur where there is a history of hemorrhage at previous confinements, where pregnancies follow each other rapidly, where patients take little exercise, eat freely, and use stimulants, in elderly primiparæ, and where metritis exists during pregnancy. Overdistension of the uterus or the presence of a tumor also favors hemorrhage. Albuminuria, extreme mental depression, and disturbances of the vascular system predispose to it. During labor, pains which are strong and quick, but cease suddenly, with long intervals between the pains, should arouse suspicion of uterine exhaustion; rapid, jerking pulse, with low tension, is also present in many of these cases.

In prophylaxis, attention is called to the importance of managing properly the third stage of labor. The left hand of the obstetrician must follow down the uterus, not using massage or stimulating it in normal cases, but controlling it. The cord is tied by two ligatures—one near the child and the other close to the vulva of the mother. When the placenta has been separated several inches of the cord are expelled; this can be determined by the altered position of the ligature upon the cord. The separation of the placenta is also recognized by a swelling detected above the pubes, due to the bulging of the lower uterine segment, and sometimes taken for a distended bladder. The uterus rises up suddenly and becomes more movable than formerly.

In addition to the proper delivery of the placenta and the removal of all portions, it is most important in avoiding post-partum hemorrhage not to deliver in the absence of pains. This is almost sure to be followed by severe hemorrhage. Byers counsels the use of strychnine and ergot before and during labor in suspected cases, with hydrochloric acid in plethoric patients and iron in those who are anemic.

In the actual treatment of hemorrhage he would use uterine massage, hot intra-uterine douching with normal salt solution, the introduction of the hand and the removal of adherent portions of placenta or membrane, packing the uterus with antiseptic gauze, and dragging down the uterus after gauze packing by stout tenaculum forceps passed through the lips of the cervix. Should hemorrhage occur from lacerations, they must be closed by suture. In after-treatment the injection of normal salt solution and stimuli, with abundant nourishment, is indicated.

In discussion, Boxall thought the loss of blood in labor to be not less than twenty ounces in the average case. In a considerable number there was no assignable cause for hemorrhage. He had observed that alcohol favored hemorrhage, while rupture of the membranes and prompt delivery prevented it. Quinine and nux vomica given before labor were useful, while ergotole has been of service in his cases.—*The American Journal of Medical Sciences.*

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE PUERPERIUM.*

BY JOHN G. CECIL, B. S., M. D.

Professor of Materia Medica, Therapeutics, and Public Hygiene, University of Louisville.

The duty of the accoucheur in the normal puerperium is mainly that of "masterly inactivity"; to be alert and watchful, and ready to cope with any complications, but with especial care to avoid meddlesomeness. It is a common observation of practitioners, that those who are least able to afford the refinements of care and nursing are often more fortunate in their "getting up" from confinements than are their more unfortunate sisters, whose wealth can secure for them the most elaborate and up-to-date attentions. This is neither luck nor chance, but rather the silver lining to the financial cloud that deprives them of the high-priced attentions that too often might be termed meddlesome.

It goes without saying, that the management of the case after labor will be determined to some extent by the nature of the labor, and by the care and skill with which it was conducted. Normal women have normal labors, and the puerperium will be normal if not interfered with. That obstetrician who conducts his cases of labor upon the aseptic plan with especial reference to himself, his instruments, and his nurse, and who recognizes labor as a physiological process, will have little to fear and less to do during the puerperium. If meddlesomeness during labor is bad, it certainly is no better during the lying-in.

* Abstract of a paper read before the Kentucky State Medical Society, May, 1901.

The management of the normal puerperium may be briefly summed up in a few paragraphs. No medicine except the usual purgative on the third day is necessary. Bedding, clothing, and external genitalia must be kept absolutely clean. Advise a light, unstimulating but nutritious diet during the first five days; afterwards let it be more varied and generous. Rest, quiet, and sleep are essential. Patient should be confined to bed from nine to fourteen days, resuming ordinary duties after thirty or forty days. There is no advantage in requiring the woman to lie upon her back for a week after delivery, but restfulness and improved drainage will be obtained by allowing her to lie upon either side. The infant should be taught to nurse during the first two days. Afterwards a systematic plan should be adopted and strictly enforced. The patient should have seclusion and protection from well-meaning but unwise advisers. Next to having a bad doctor and a bad nurse, I know of nothing productive of more unhappiness, discomfort, and frequently actual illness in the young mother and her infant than the promiscuous and too often vicious advice of these well-meaning but ignorant friends.

Close attention should be given to the function of the bladder. It is generally advisable to use the bed-pan, but should this be attended with any considerable difficulty, as is not infrequently the case, the catheter should be used or the patient should be lifted onto the commode. Unless there be some especial reason why, it is generally preferable to allow the woman to sit up to void urine rather than resort to the catheter. Should the latter become necessary, then its use should be surrounded with every aseptic precaution.

The first danger to be apprehended in the recently delivered woman is hemorrhage. When the after-birth has been properly delivered, it is remarkable how seldom this accident occurs. In a limited experience of twenty-two years, I have met with serious post-partum hemorrhage only a few times, and in nearly every instance it was due to avoidable cause. The routine practice of giving ergot after labor is unnecessary, because in the vast majority of cases it will not be needed. When, however, there is a history of previous post-partum hemorrhage, or the labor has been very long and the use of chloroform free, or when the labor has been precipitous, or when there is a general flabbiness of muscular tissue, or any other good reason to apprehend hemorrhage, then a prophylactic dose of ergot should be given, and a constant watch over the uterus should be maintained for some hours. Not in-

frequently hemorrhage is induced by a too hasty or too forceful delivery of the placenta. Too often the doctor becomes panic-stricken, or too anxious to get away at this time, and institutes measures both rough and hasty for the completion of the labor. The older, and I believe the wiser, authorities taught that from one half to one and one-half hours was the proper length of time for the third stage of labor.

With the hand upon the fundus uteri for no other purpose than that of observation, there is much comfort in recalling the old obstetric maxim, "A contracted womb can not bleed to a dangerous extent." Give time for the formation of clot in the opened sinuses, and do not by any means disturb these clots, then hemorrhage will not occur. Inexplicable as it is, some of the worst cases of post-partum hemorrhage that have come under my observation have been in cases that had received large doses of ergot during the second stage of labor. When hemorrhage does come on, we have in ergot a valuable remedy, and it should be given in decided dose. Other measures, more or less efficient, are vigorous stimulation of the womb, intra-uterine injections of hot water, weak acid or astringent injections, or the insertion of a lump of ice into the womb. No patient should be allowed to die of hemorrhage without having the benefit of subcutaneous injections of the normal salt solution.

A more important, indeed the most important, feature of the puerperium is the possibility of sepsis. That auto-infection may and does occur is admitted, but this is so exceptional that in this connection it may be ignored. The overwhelming majority of cases are of extraneous origin. With the labor conducted under strict but not necessarily elaborate aseptic precautions, septic infection will seldom complicate the puerperium. When Semmelweis and others, a few decades since, discovered the cause of the frightful mortality then attendant upon childbirth to be due to the infection from external sources, the pendulum of antisepsis began to swing strongly towards reform and correction. That untold good resulted, and that countless human lives were spared to these measures, is undoubtedly true. As is generally the case, the pendulum swung too far, and some of the steps advised and intended to protect the lying-in woman are now known to be productive of harm rather than good. It does not require a long memory to recall the elaborate advice and instructions that were given as to the use of medicated vaginal and intra-uterine douches. The parturient was to have both ante-partum and post-partum vaginal injections, and

upon the slightest provocation the intra-uterine douche was advocated.

The use of the post-partum douche as a routine practice is still in vogue to a greater or lesser extent. Many times the patient makes a special request to be syringed, because its use in previous confinements made her feel so good and clean. There is a use for the vaginal syringe, but it is a very limited one, particularly in obstetric practice, and it is a debatable question as to whether the female sex would not be better off were every vaginal syringe blotted out of existence. I wish to go on record as advocating the vaginal douche only when there is a positive indication for it, and then only when in competent hands and under the most rigorous aseptic precautions. Assuredly the delivery of a child with clean hands or clean instruments is not a positive indication for a douche to follow. Bacteriologists have shown the vagina to be a fertile field for bacterial growth and development—the normal habitat of probably forty or fifty different varieties of germ life. Part of these are inimical to health, part are not. So we may picture a constant warfare going on between the foes and friends of health. In the majority of instances the friendly bacteria are able to take care of themselves and their unconscious host. Accepting this as true, and it is proven by practice, then there is no need of help in the use of the douche, and, moreover, the antiseptic so used will prove as destructive to health germs as to disease germs.

The clean delivery of a clean woman with clean hands has not added a single element of danger, but the introduction of a douche point may carry germs from without to the interior. We all know how often the old family syringe will be called into requisition, and we also know how hard it is to impress upon the mind of the ordinary nurse even the elements of real aseptic practice in the lying-in chamber. Of course there will be differences of opinion as to what constitutes a positive indication for the douche. It is common belief and practice that an offensive lochia calls for the use of the syringe. While this may be generally true, we see many of such cases progress to recovery as well without a douche as with one. Now and then we see cases develop unmistakable evidences of sepsis only after being subjected to vaginal injections.

Some years ago I was an ardent advocate of the vaginal douche upon even slight indication, and I have used the intra-uterine douche with signal advantage; but as years pass by I find less and less use for *this*

kind of treatment. A very foul lochia, due to decomposing blood-clot or retained secundines, especially if accompanied by symptoms of constitutional infection; a sinus discharging pus into the vagina or womb; a purulent leucorrhea present before and during labor; these and such like constitute positive indications for the use of the douche during the puerperium.

What has been said referring to the douche is emphasized with even more force in regard to the curette. This is an instrument that has an exceedingly narrow field of usefulness in obstetric practice.

The abdominal binder, after labor is completed and the bedding and clothing changed, is a source of comfort to the patient. It gives support to the relaxed abdominal walls and stimulates the uterus to contract and to remain contracted. A compress may be inserted underneath the bandage if hemorrhage has occurred or is threatened. It should not be drawn so tightly as to depress or retrovert the non-involuted womb.

A word as to the so-called milk fever. That a purely physiological process should result in the development of fever is hard to conceive. The elevation of temperature so often seen on the second or third day coincident with the establishment of lactation is more rationally accounted for upon the hypothesis that it is of septic origin. So also are we inclined to believe that many of the cases of malaria and typhoid fever following labor are caused by the strepto- and staphylococci rather than by the plasmodium of Lavarán or the bacilli of Eberth.

The general tone of this paper may seem to be iconoclastic, but the impression I desire to make is that we should take advantage of every real advance or improvement of modern days, but not to go astray in our endeavor to improve on nature's way; that we be fully alive to the prevention of trouble, but also to refrain from meddlingness.

LOUISVILLE.

HIP-JOINT AMPUTATION: WITH REPORT OF A CASE.*

BY WILLIAM O. ROBERTS, M. D.

To Dr. Walter Brashear, of Bardstown, Ky., is due the credit of having performed the first hip-joint amputation in this country. It was done in 1806 for compound fracture, and the patient recovered.

Le Dran included amputation at the hip-joint in his demonstrative courses in 1739, and read a paper on its feasibility before the French Academy. The year previous, however, Moran and his pupils, Volkes and Pritchard, had also practiced it upon the cadaver, so it seems the operation originated with them.

The first successful case on record was that of Penault, in 1773. The operation was done for gangrene. The earliest cases in which the operation was used for caxalgia were those of Kerr and Thomson, in 1774 and 1778. Both were fatal, and the operation seems not to have been done again for this disease until the latter part of the last century.

"Amputation at the hip-joint in reality owes its existence to the French Revolution. In 1794 the elder Blanden performed it thrice, with one recovery. During his different campaigns Larrey repeated the operation several times, and gave it a standing among surgical procedures, although it is doubtful if any of his cases recovered."

The first successful case where the operation was done for gunshot wound was that of Brownrigg in 1812. The most complete tabulated list of cases up to 1881 is that of Dr. F. C. Shepherd in Ashhurst's International Encyclopedia of Surgery. It contains 633 cases with 393 deaths, and in 20 cases the result was unknown, making a general mortality of 64 per cent. Where the operation was done for disease the mortality was 40½ per cent, and 66 per cent in cases of injury. The highest mortality was in cases of gunshot injury, being 87½ per cent.

John A. Wyeth, in a paper read before the New York Medical Society in October, 1900, gives a list of 267 cases that have been operated upon under his method of controlling hemorrhage, with 53 deaths, or a general mortality of 19½ per cent. Where the operation was done for disease the mortality was 17 per cent, and 63½ per cent in cases of injury. By comparing these tables it will be seen that while the death-rate has been greatly reduced within the past ten years in cases where the operation has been done for disease, there has been very little reduction of the mortality in cases of injury.

* Read before the Kentucky State Medical Society, Louisville, May, 1901.

In a letter to the reader, dated April 22, 1901, Dr. Charles McBurney says that since resorting to his method of preventing hemorrhage, namely, direct pressure of the common iliac by the finger of an assistant through what is known as his gridiron incision, he has had no loss of blood and no patient has died as the result of the operation, or soon afterward from any cause. Several have died months later from recurrence of sarcoma. The advantages claimed for his method are: "The whole operative field is perfectly free from incumbrance of any kind. Cases requiring a very high anterior incision can be most satisfactorily handled. It is the only method applicable to amputation for extensive tubercular disease about the hip-joint and upper part of the femur, and the method has no disadvantages."

The special dangers which render amputations at the hip-joints such a formidable operation are from hemorrhage and shock. According to Lunning, "5 per cent of all patients operated on do not survive the operation, and 70 per cent of deaths occur within the first five days."

Various methods have been suggested for preventing hemorrhage during the operation. Larrey advised preliminary ligation of the femoral artery; Pancoast, Lister, Esmarch, and others, instrumental compression of the abdominal aorta; Gross and McEwen, digital compression, by an assistant, of the same vessel; and J. J. Buchanan, of Pittsburgh, in 1888, in a paper read before the Pennsylvania Railway Surgeons' Convention, suggested "the opening of the abdomen and direct digital compression of the aorta through the incision," and Dr. Neal Hardy, of Sandusky, Ohio, used this method in a successful case in November, 1890. Woodbury, of Philadelphia, and Van Buren, of New York, advised digital compression of the common iliac, by the hand of an assistant, in the rectum; and R. Davie, of London, used for the same purpose a long rod with a knob on its end, known as the Davie lever. McBurney, of New York, in 1894, called the attention of the New York Surgical Society to his method of direct compression of the common iliac artery by the finger of an assistant, through what is known as his gridiron incision. W. L. Estes, of Bethlehem, Pa., practiced gradual dissection, in which the femoral vessels are first exposed, tied, and divided between two sets of ligatures. "The flaps are then formed as may be indicated, and the soft parts divided as for any operation of the body where a tourniquet can not be employed, all known vessels being secured before they are divided, and all others caught with forceps as soon as severed."

Jordan Lloyd, in 1883, used an Esmarch bandage in figure-of-8 turn around the hip and trunk, placing a roller bandage as a pad beneath it for pressure on the external iliac. Richard Valkman, in 1874, reports three cases in which, after driving the blood out of the limb into the body with an Esmarch bandage, he "placed an elastic loop in the femoral (*scrolure commissure?*), drawing the ends upward and outward, the anterior passing parallel with Poupart's ligament, the posterior near the gluteal fold, in which position it was held by an assistant. To further secure it in position, loops of roller bandage were thrown beneath the rubber tourniquet in front and behind, and upon these, during the operation, upward traction was also made by an assistant."

Trendelenburg devised a steel rod to be passed through the soft parts in front of the joint, and a rubber tube to be wound around its protruding ends in figure-of-8 turns. After the anterior flap is made the vessels are secured, and the rod is then placed through the soft parts behind the joint in a similar manner before the posterior flap is made.

Wyeth's method consists of two mattress needles, one introduced one inch below and slightly to the inner side of the anterior superior spinus process of the ilium, passing beneath superficial muscles and emerging on the outer side of the hip about three inches from and on a level with the point of entrance. The other enters an inch below the level of the crotch, internal to the saphenous opening, passing through the adducta muscles and coming out an inch below the tuberosity of the ischium. The points of the needles are shielded with corks to prevent injury to the operator. A thick pad of gauze is placed over the femoral vessels. Above these needles a piece of strong rubber tubing is wound around the limb over the pad six or eight times and tied.

Senn first disarticulates the head of the femur through a long perpendicular incision over the trochanter, and then, with a long pair of forceps introduced into this incision and passed through the limb to the inner side, where a counter opening is made for them to emerge, he grasps a piece of rubber tubing in its center and pulls it through the limb. The tubing is then divided, and one part of it is tied anteriorly around the anterior portion of the thigh; the other is passed around the posterior portion of the thigh, and then brought around the anterior portion and tied, thus doubly securing the flap containing the femoral vessels.

As to the different methods of prevention of hemorrhage, I believe with Rudolph Matas that "none can compare with Wyeth's in

their general application, thoroughness, simplicity, and wide range of usefulness." Hot salt solution has played a very important part in lowering the death-rate of this as well as of other big operations. While it is of incalculable value in shock from loss of blood, it is also very beneficial in surgical shock without hemorrhage. The best effect is secured when the saline solution is given by intravenous infusion. The temperature of the solution should be from 101° to 115° , and it should be injected slowly at about the rate of a pint in fifteen minutes. Dawbarn suggested the idea that to introduce the hot salt water directly into the blood-current would bring the heat immediately into the heart, and thereby stimulate the heart and respiratory center of the medulla, and when administered in this way would also increase the circulating fluid much more quickly. The quantity of the saline to be used will depend, of course, upon the condition of the patient, the amount necessary varying from one half to as much as four pints. In cases of injury, where the shock is slight and the loss of blood trifling, amputation can be done at once. Salt solution, while not absolutely necessary, can do no harm, and should be used as a safeguard.

In cases of inquiry, where the shock is marked, either from loss of blood or the nature and extent of the injury, we should endeavor, by the use of saline solution, warmth to the surface of the body, elevation of the foot of the bed, together with atropia, strychnine, and small doses of morphine given hypodermatically, to bring about reaction before attempting to operate.

"Amputation should not be deferred too long; after perhaps six hours, each hour increases the danger of infection. In the majority of cases, if the patient is to recover at all from the shock, some signs should be seen in from four to six hours."

I myself have operated upon two cases, both of which recovered. These cases have been reported to our local societies. The first one was an old hip case. The patient was thirty-five years of age, a very small, thin woman. She had had hip disease since early childhood, and ankylosis had taken place with the femur almost at right angles to the pelvis. The limb was greatly atrophied, and there were a number of fistular tracts. Dr. Ap Morgan Vance, who assisted me, by pressure with his thumb on the femoral artery, and at the same time almost encircling the limb with his hands, so completely controlled all vessels as to render the operation practically bloodless. Of course the Esmarch was used to drive the blood from the limb into the body first. The

second case was one of railway injury. The patient, a negro man, aged thirty-one, fell from the platform of a Pennsylvania train, and his left thigh was run over at the middle third. The bone was crushed and soft structure lacerated nearly to the hip-joint. There was a rent in the skin over the femoral vessels extending near to Poupart's ligament. When he reached the hospital, about three hours after receipt of injury, his pulse was only 84 and fair as to volume, temperature 98° F. So the operation was done at once. As the soft structures were so badly contused and lacerated, it was decided to do a preliminary ligation of the femoral high up, and then make the pass slowly, catching the vessels as they were divided.

Dr. Thomas L. Butler assisted me in the operation. The amount of blood lost was very trifling. The man made a good recovery. We were afraid—from the amount of contusion of the tissues—that the flaps would slough, but they did not. There was, however, some supuration.

LOUISVILLE.

SUBSTANCE, OR CELL LIFE, AND THE GERM CONSIDERED FROM THE STANDPOINT OF NATURAL PHENOMENA.*

BY U. V. WILLIAMS, A. M., M. D.

Carlyle has most tersely said, "The universe is the Great God's fact," and that all its phenomena are not a matter of "just happened so;" neither is nature governed by stratagem nor special providence, but by inexorable law, fixed and unalterable, with no "variableness or shadow of turning," as is the nature of "Thou First great Cause least understood." The time has gone by to search for living organism by a spontaneous aggregation of molecules in vegetable or other infusions, or from a layer of formless primordial slime dispersed over the bed of the ocean. Living matter, during our epoch, has been and continues to be derived from pre-existing living matter, even when it possesses the simplicity of the structure of a bacterium and the morphological unit of a cell. When we consider the cell as the point of organic tissue building, as the primordial, we assume the beginning to be within that cell and capable of nucleus and nucleola *ad infinitum*,

* Read before the Kentucky State Medical Society, Louisville, May, 1901.

beyond the limits of the most powerful microscope and the infinity of further possibilities. We must reach an imaginative point in its genesis, where it ceases to be a solid, a substance, and for want of a nicer subdivision we will call it a gas. So with the infinity of the genesis of the germ. Starting with the cocci, which Dorland defines as "any individual organism or spheroid and bacterial cell-form of a group including macrococcus, micrococcus, gonococcus, streptococcus, etc., and then when we have of the single variety of streptococcus seventy-one elaborately classified divisions," we are lost in an impenetrable maze, unless we assume a common origin and let the environment determine the differentiative. Any other form is capable of the same infinite classification, only limited by the number of observers and the power of human endurance to comprehend and classify. Rather is it the part of wisdom and convenience to classify as one common starting-point that we are endowed with a divine organism; constitutional defects and heredity play but a secondary part in etiology. The favorable soil for a disease is a soil made so by defect, usually an acquired one of the normal resisting power, and that starting-point is substance, and let environment determine the variety. Such will be the object of this paper, and, as on former occasions, let us begin with the Great God's fact of Carlyle, Nature, admitting that abiogenesis of cell life can not be refuted, neither can it nor has it been proven.

Substance is defined as "the material of which an organ is made up." Thus we have "Dottel substance," "Substance of Nissl," "Rolando's gelatinous substance," "Rollet's secondary substance," "Sommering's tigroids," and as many others as there are scientists delving in any especial department. All are like the cell, or the coccus, a something whose characteristics and adaptation wholly, like those, depend upon environment, or catabiotic genesis, the cell plasm lying in its periphery substance. All scientists are joining with Prof. Thurston to-day in asking, What is this real character, the mighty world wonder which the realistic scientist calls nature, or the universe, the idealist philosopher calls substance or cosmos, the religionist calls God? We must admit we know little of its essence. There remains beneath all an apparent unknowable. Haeckel throws no light upon this eternal sphinx-life. The realist, the idealist, and the Christian each once affirmed the possibilities of spontaneous generation, the production of living organism from non-living matter, but they have abandoned that theory. Now they all affirm that living matter is only derived from

living matter pre-existing back to the eternal fiat when "God moved upon the face of the waters," and that now we must consider cells and cell life exclusively. Virchow maintains that with a microscope of unlimited power the central cell could be explored with all its intricate and complex phenomena, its chemico-physical results, and be made to give up its secrets. Stallo maintains (page 174) "the explanation of any phenomenon aims at the exposition of its genesis from its simplest beginning or earliest forms." The gaseous form of matter is the true basis for the explanation of the solid form, and not conversely or reversed. And this is possibly in accord with Prof. Lee's conception of the origin of the solar system when he affirmed "the solar orb at one time filled the entire space of his present system," originating his formula of temperature, constants, and area. Constant is defined: "A datum, fact, or principle that is not subject to change." Area is likewise defined: "A limited space or plane surface."

From Pander in 1817 down to the present time all authors have published certain evidences of the pathogenesis of cell characteristics. Virchow gives three divisions of cell form: ecto, from the Greek, meaning on the outside; meso, or the middle, and puto, the within layers of each cell.

The details of chemical differentiation resulting or obtaining in physiological differentiation have been demonstrated and practical results obtained, which are in evidence. Differentiation and morphological species are in perfect accord, one with the other, thereby becoming the rule and the law.

The question is, where and what is the physical law of control? The only answer within our grasp is, "gravity, or tendency toward the center of the earth, weight."

Now let us briefly consider the apparent variations of gravity. Within its bounds are three direct movements: First, the absolute pull toward the earth; second, the balanced or neutral motion sustaining a condition of a horizontal plane, or suspended motion; third, the lighter or the very lightest being driven from the earth (for instance, the gas or substance in the balloon). We can not accept Quarterfaye's theory of ethrodynamics, or gravity overcome.

It is physically axiomatic that the heaviest atom pulling to the earth and filling interstitial spaces displaces and pushes other lighter atoms from the earth. Those of equal weight remain suspended. On these premises we have, on a different occasion, mentioned, the three

different movements of fermentation (viz: fat, starch, and albuminoids), as using the causative of cell life in its local manifestations, not as generative *de novo*, but as fulfilling an unvarying law of the natural universe. If Virchow admittedly fails to place the origin of the three different motions or agencies of cell form and inevitable results, how and where are we to find it? With this in view, place before the eye, or imagination, a glass vessel holding a normal solution of stimulated, living, fermentable matter, and notice that the individual globule forms explode, divide, reform, precipitate, or rise to the surface, and here take Stallo's proposition, viz., the gaseous form is the true basis to explain the solid, the nascent, or just form gases separated from other cellular form, place themselves in *in vacuo*. Other macerated or divided cellular forms fix themselves on this vacuo wall; its gases being lighter than water, its natural solvent, the gaseous vacuo is forced by the law of gravity to the surface. During this exit under solvent pressure these divided cells are still giving up and placing in the vacuo their nascent gases, which, enveloped in water, reach the surface and there break or explode. The vacuo gases in contact with oxygen, whether of air or water, and atmospheric pressure resolve themselves into the first or original fibers, gases into semi or absolute solids.

In all of this the plan is essentially dependent upon density and specific gravity. As to what the original fibrous compound is, we may be safe in assuming that it is sugar. Sugar is resolvable into fats, fats into starch, starch into albuminoids, and hence we may have fats, starches, proteids; gases into semi-solids and solids, fiber and tissue. Whether a living cell or a deleterious germ (see Liebig, page 92, on sugar), "the element of sugar yields to every attraction, and to each in a peculiar manner." Again, note that every environment in the processes and evolution of sugar are the identical environments of pathological fiber and tissue. The generation of the one is the condition of the genesis of the other, and *vice versa*, either in vegetable or animal physiology.

If these views are found to be correct, and maybe none can dispute them, then another school, quids and study, lies before us, and we may assert, with Carpenter's concept of "Age, decay, and environment," that density and gravity are the absolute directors of substance, cell forms, and life. Therefore, if density and gravity are lower than life's normal, a way must be found in accordance with their unalterable laws to raise or attenuate; if too high, then to lower.

The so-called germ theory, its movements or specific life, normal or abnormal, its infection, production, multiplication, or reproduction are only subsequent consequences. Gravity, with the above-mentioned law of primal chemistry, that is, acid, base and neutral, is the arc of the circle for all substance, as gravity and density dictate the consequences for good or evil results. Sir Henry H. Rusby (*Scientific American Supplement*, page 21093) says: "Up to the present time we are practically without mineral or vegetable drugs capable of destroying these vegetable plants, or germs, within the body. Many substances are fatal to them, but only when concentrated to a degree fatal to our tissues. The problem can only be solved by natural forces working within us."

In the near or far future this will be our concept of therapeutics, as the nuclea, nucleola, or nucleated cells and this unicellular direction, though we differ from the universally accepted opinion that the cell plays an active though not exclusive part in specialization. It is exclusive, this exclusiveness being based on each and every demand of cell life, which is special work. Work demands special movements or kind, which is motion or energy, which is friction, which is heat, which is special oxidation, which is function, which again is demand, and its circle of environment of final results, which is existence or life.

What is true of a cell is also true of a germ, possibly an aborted cell, all formed alike chemically and dynamically, the one normal, the other abnormal, predisposition and environment determining its character and exciting cause, determining production and substance. Deleterious conditions resulting in aborted cell growth produced by fermentation and putrefaction evolving specific characteristics according to environment; infection or contagion, these determining the specific germ, which conditions are often so obscure or at least so illy defined as to baffle authenticated investigation, as, for example, the germ of cerebro-spinal meningitis, and many other yet undiscovered beginnings. We must not assume that disease is a visitation of Providence, or that drugs have absolute virtues, and that medicines are specifics.

FRANKFORT, KY.

TYPHOID FEVER IN INFANCY.*

BY J. B. KINNAIRD, M. D.

In a recent discussion of the etiology and pathology of typhoid fever in infancy at the New York Academy of Medicine there was a diversity of opinion as to the rarity of its occurrence in infancy and childhood. Dr. Northrup stated that he had not seen, with one exception, a sure case in an infant in twenty-five years, but that it did occur in New York more frequently, according to reports, than in some other cities. Dr. Holt, in the last edition of his work on "Diseases of Infancy and Childhood," says that he has never seen a case of typhoid fever in a child under two years old, and believes it to be rare, though undoubted cases do occur. During his eight years' service at the New York Foundling Asylum not a single case came under his observation.

Exceptional cases are observed in general epidemics. In an epidemic at Stamford, Conn., in 1895, four cases were seen out of four hundred and six persons attacked. In 1894, during an epidemic at Montclair, N. J., three cases occurred out of one hundred and fifteen persons attacked. All of these cases were traced to infected milk. Holt says: "After the second year typhoid fever is by no means rare, but it is not until after the fifth year that it can be said to occur frequently. The following figures, embracing groups of cases reported by eight writers, represents, perhaps, as well as statistics can, the relative frequency with which the disease is seen at the different ages: Of 970 cases, 8 per cent occurred under five years, 42 per cent between five and ten years, and 50 per cent between ten and fifteen years."

The infant is usually immune, and when an epidemic occurs the infectious material acquires sufficient strength to affect it. The opportunities for the typhoid bacilli gaining an entrance into the system are greater during an epidemic. Typhoid fever, occurring so rarely in infancy, and the mortality being considered so low, has been unrecognized in many cases. Many unsuspected sporadic cases occurring during the summer and early fall are treated for gastro-intestinal disturbances; during epidemics, the attending physician, being on the alert, is more likely to make a correct diagnosis.

Insidious and slow in its attack upon the adult, we have ample opportunity of watching its development and of forming a reasonably

* Abstract of a paper read before the Kentucky State Medical Society, May, 1901.

correct diagnosis; abrupt in its onset in infancy, we are more likely to err. A great many cases are ushered in by vomiting, followed by extreme prostration and coma. As vomiting is also the initial symptom of scarlatina and other febrile disturbances, we are liable to be misled. When vomiting occurs late in the disease you may suspect peritonitis or perforation, or both. Sometimes the initial symptom is a convulsion. This is also true of many other diseases in infancy. After the convulsion the case runs its usual course. Diarrhea is often present, but is not the rule, for we have more frequently persistent constipation; the stools are not uniformly of the characteristic pea-soup color. The stools are usually green or very dark-green; the eruption is less constant and less abundant. Epistaxis occurs in a limited number of cases. The pulse is usually good but irregular; the classic dicrotic pulse is rare. Functional heart murmurs are quite frequent; the nervous symptoms are more marked than in the adult, and instead of active delirium we find dullness and listlessness.

In the small number of cases in infancy and early childhood I have usually found much stupor, headache, moderately high temperature, subsultus tendinum, and rarely carphilogia. Delirium is sometimes active. There is often contraction of the pupils and opisthotonos simulating cerebro-spinal meningitis. In one of the two cases under two years of age treated by me there were many symptoms simulating tubercular meningitis. The infant was sixteen months old, with tubercular family history. Not until other cases developed in the family did I make a correct diagnosis. Eight other cases among brothers and sisters followed in rapid succession, until all were confined at the same time. All recovered. In this infant there was marked tympanites, some opisthotonos, pupils contracted, pulse irregular and rapid. Sometimes it would be in a semi-comatose condition, at others there would be active delirium; its tongue was coated and dry, with slight diarrhea. Carphilogia was marked.

These cases originated in a wealthy family in a country residence in excellent sanitary condition, where there had never been a case of typhoid fever as far as we could learn. All water used by them came from a good cistern. The mother had been occasionally nursing a tenant's infant one year old that had what was supposed to be diarrhea, but must have been typhoid fever, for the child became emaciated, had a high temperature, and recovered in about three weeks. This infant was not treated by a physician. The infection must have

been transmitted from the mother to the infant, probably carrying the bacilli in her clothes or upon her hands. The tenant's house was located several hundred yards below the main residence, on a hillside sloping from the residence. It would have been impossible for the bacilli to have been drained into the cistern from that source. All who assisted in nursing these cases, with the exception of those who did not drink the cistern water, contracted typhoid fever, hence it is reasonably sure that these cases originated from the use of the cistern water. Seventeen cases originated from this source, six of which were in young children. As the Eberth bacilli are most frequently found in water, and as infants drink comparatively little water, this may account for its rarity in infancy.

Where infants are bottle-fed, it is the custom in the country for the mother not only to boil the nursing-bottle, but also the milk used, thus killing the bacilli if any are present. Milk conveys the disease in a large number of cases, it being a most excellent culture medium. The city of Louisville has had a notable example of milk infection by careless dairymen. The bacilli may be conveyed by the air, by clothing, or by the hands; they can be carried by the sick mother through her milk to the infant, or through the placenta to the child in utero. The means of infection are so numerous it is often difficult, and many times impossible, to discover the mode or source of infection.

The mortality is so low we have few opportunities of making autopsies, but the lesions are known to be usually in the gastro-intestinal tract. Frequently no such involvement occurs. It has been known to develop in the lungs; there is hyperplasia of Peyer's patches and the solitary follicles of the small intestines. Ordinarily the smaller the child the fewer the number. In the adult, necrosis of Peyer's patches is frequent; in the infant rare. The spleen is enlarged at the end of the first week; there are the usual parenchymatous changes in the liver, spleen, heart, etc., but to less extent.

Intestinal hemorrhage is rare; I have never seen a case of intestinal hemorrhage in a child. As in the adult, we frequently have bronchitis as a complication. Pneumonia as a complication occurs in 10 per cent of cases reported by authors; nephritis, pericarditis, abscesses, carbuncles, tuberculosis, and inflammation of the joints occasionally occur; otitis and parotitis are common.

Differential Diagnosis. Typhoid fever simulating so many diseases of infancy, and the inability of securing a subjective history, for obvious

reasons renders a differential diagnosis exceedingly difficult. We must distinguish it from malarial fever, tuberculosis, meningitis, ileo-colitis, and continued fevers. In malarial or any irregular or intermittent fever the administration of full doses of quinine will affect the temperature-curve; not so in typhoid fever. In malarial fever the plasmodium is found in the blood; never in typhoid. In typhoid fever the temperature-curve never touches the normal at any time during the twenty-four hours; in malarial fever it does.

In ileo-colitis the intestinal symptoms are usually severe; there is no enlargement of the spleen, and there is absence of the temperature-curves. The cerebral symptoms of typhoid are hard to distinguish from meningitis. In meningitis the respiration and pulse are slow and irregular; there is usually local paralysis in meningitis, which is seldom seen in typhoid.

Tuberculosis resembles typhoid so closely that a differential diagnosis can not be made positively until lung symptoms appear. In an editorial in the *Journal of the American Medical Association*, May 11, 1901, it is said: "The clinical differentiation of typhoid fever is difficult. It took a long time before it was separated from other fevers. Miliary tuberculosis and meningitis are even now distinguished from typhoid with great difficulty, the definite diagnosis at times being made only after careful bacteriologic examination. Recently it has been indicated that other bacteria than the typhoid bacilli, namely, the so-called para-typhoid, may produce the clinical symptoms and signs of typhoid fever. Strictly speaking, the clinical picture of an infectious disease is not always sufficient for its diagnosis; the clinical picture owes its existence to the infecting agent."

Widal's test is undoubtedly of great value for verifying the diagnosis of typhoid fever after the first week, but is not infallible. The agglutination of the typhoid bacilli does not always take place, and has been found in other conditions. The bacilli have been found in rose-colored spots, in bone marrow, and in osteomyelitis.

Treatment. Very little medication is required. The patient must be kept in bed and attended by a sensible if not a trained nurse. The mother is not always a competent nurse, and should be relieved of the details of nursing; she should have regular rest and the most nutritious diet. The sick chamber should be a large, well ventilated, sunny room, away from the noises incident to domestic life. The diet should be exclusively liquid. Milk is the only food required, and all substitutes

are a snare and a delusion ; it is the only reliable food. If the patient will not nurse, administer peptonized milk. The internal administration of water is both antipyretic and diuretic. Cold and warm water baths are to be used. Children are so frightened by tub baths that I make it a rule to advise sponging with warm water and alcohol. Water should be used "internally, externally, and eternally." When the temperature is above 103° I have the patient sponged every hour, or half hour, until the temperature is down to 99° . Three times a day the nurse is required to give an inunction of olive oil. This reduces the temperature, equalizes the circulation, and furnishes nourishment. If parents insist on giving medicines, I generally prescribe dilute hydrochloric acid in as much water as the infant will take. The antiseptic treatment can be followed, but not according to the Woodbridge plan. If there is much diarrhea I give euthymol or listerine, according to the age of the patient, either alone or combined with sub-carbonate of bismuth ; when the heart grows weak and the temperature is subsiding I administer strychnine. A combination of strychnia with elixir digestiva (which contains pancreatin, pepsin, and trypsin) makes a nice and convenient preparation. Give no antipyretics unless you fail to reduce the temperature by baths ; use the coal-tar derivatives cautiously. Dr. Delafield claims that there is not the amount of danger in these preparations as is generally supposed. For headaches I would prefer some of the bromides. Turpentine stupes can be used for the tympanites present ; sometimes it may be necessary to pass a small rectal tube for this purpose. Persistent constipation should be relieved by warm salt water enemata, or by glycerine suppositories. Stimulants are rarely required. Good common sense on the part of the physician and strict obedience on the part of the nurse and attendants are prerequisites for success in the treatment of typhoid fever, either in the adult or infant.

LANCASTER, KY.

THE CLINICAL EXAMINATION OF THE BLOOD IN DIAGNOSIS.*

BY L. B. COOK, M. D.

The blood as a means of diagnosis occupies a very unique place in medicine. In a few affections it furnishes a ready-in-hand diagnosis, and in others it may be as valuable, as in the diseases that carry in the blood the diagnosis with them.

The average number of white cells is 7,500, red cells 5,000,000 per cubic millimeter, and any marked deviation from these numbers, except in the anemia of the old and the plethora of the newborn, is pathological. A parallel increase or decrease of hemoglobin with corpuscles gives index colors $=1$; an increase of hemoglobin gives index $+1$, and a diminution index -1 . The five varieties of white corpuscles that aid in diagnosis are the large and small lymphocytes, the polymorphonuclear neutrophile, the eosinophile, and the myelocyte. Leucocytosis is an increase of the leucocytes without diminution of the polymorphonuclear; lymphocytosis is a relative increase of the lymphocyte without a total increase of the other varieties. We may, in a measure, project the degree of health, and in children the degree of development, as the polymorphonuclears predominate over the other varieties. The erythrocyte is of special diagnostic and prognostic value in differentiating diseases, but can never equal the leucocyte in the diseases to which I shall in brief call your attention.

Anemia. Anemia is one of the most common affections of the blood, and may be defined as a diminution of the corpuscles or hemoglobin, or both; the serum can only be temporarily diminished. A blood examination readily discloses the pathology, enabling one to make a diagnosis of not only anemia, but also the degree of anemia, and whether or not we have to deal with a secondary or fatal form. A mild form of anemia is characterized by a diminution of the hemoglobin and specific gravity; the severe form by poikilocytosis, by changes in the staining properties of the red cell, by a less number of red corpuscles, by the macrocyte and microcyte, and by the nucleated red cells, viz: the normoblast, the microblast, and megaloblast. The presence of a large per cent of normoblast in the circulation means a great number are thrown into the circulation from the bone marrow before maturing. They are young red corpuscles, the home of which

* Abstract of a paper read before the Kentucky State Medical Society, Louisville, May, 1901.

is the bone marrow in health and peripheral circulation in those diseases that require rapid corpuscular reproduction. Their presence indicates a heavy drain upon the system by hemorrhage or disease. They are of more favorable prognostic value than the megaloblast, which is never found in the circulation in health, but circulate in increased numbers in the pernicious and fatal forms of anemia. In severe hemorrhage the tissues supply the depleted serum, but the bone marrow can not so rapidly supply the cellular elements, making the blood-count very low. This may be of very practical import in cases of injury, where it is often impossible to tell how much blood has been lost and whether or not the patient is suffering from shock due to loss of blood, from concussion, or from the mangled tissues. In either case there can not be a shock without a concurrent low blood-pressure, and if shock is due to hemorrhage, transfusion is the remedy, but if due to concussion, transfusion would increase the shock.

Pernicious Anemia. The blood in pernicious anemia is pale and watery; the red cells do not generally fall into rouleaux, and resemble the blood of the lower animals. The degenerative changes of the red cell are characteristic. They are large and oval, contrasting with the smaller washed-out chlorotic cell. The most striking characteristics are the decreased number of red cells, the average being 1,000,000, lymphocytosis, and the nucleated cell. The megaloblast, when more numerous than the normoblast, establishes the diagnosis *per se*.

Chlorosis. The blood of chlorosis is readily distinguished from pernicious anemia, but from grave secondary anemias it is more difficult. The blood-count gives 4,000,000, index color low, contrasting with high index of pernicious anemia. A striking feature is the excessive pallor without material diminution of the red cell. Hemoglobin 40 per cent or less. Oligochronemia is the distinguishing characteristic of chlorosis, and even this is not sufficient to make a diagnosis, though it aids in differentiating from diseases like pernicious anemia that have high per cent hemoglobin. The red cells are uniformly smaller and paler than in the secondary anemias, where the red cells are more irregular in size and staining qualities. The chief diagnostic point may devolve upon the white cell, an increase of which would aid in excluding chlorosis from malignant disease and the different suppurations. Stengel has shown, however, that with the blood examination the history and course of the disease must be taken together before any diagnosis can be made.

Leukemia. The blood in each variety of leukemia is specific in diagnosis, and in each type the blood is different. In no other disease can a blood examination be of more value, and, in fact, it furnishes the only positive diagnosis between Hodgkin's disease and leukemia. The pathology of both diseases, outside of the blood itself, is the same, and post-mortem fails to find any difference. A diagnosis in the myelogenous type can be made by the great number of myelocytes, and the lymphatic type by the lymphocyte. The presence of a large per cent of the polymorphonuclears would exclude leukemia from leucocytosis. The red cells are somewhat diminished, but not sufficient to aid in diagnosis. The nucleated red cell is greatly increased, and may reach as high per cent as in pernicious anemia. The myelocyte is found in great numbers; the least count always gives 100,000. They are larger than the other leucocytes, and give, therefore, the appearance of the blood as being composed mostly of myelocytes. The polymorphonuclears, lymphocytes, and eosinophiles are increased because there is a leucocytosis, but their percentage is not increased, the increase being in the myelocyte. The cell characteristic of leukemia is the myelocyte, and only by its presence can a diagnosis be made. Lymphatic leukemia is conspicuous for the absence of both the myelocyte and the nucleated red cell, and the diagnosis must devolve upon the large per cent (90) of lymphocytes. Malignant disease and tumors of spleen and kidneys might simulate leukemia, but the leucocyte, being the polymorphonuclear, would readily clear the diagnosis.

Serum Diagnosis. The serum of the blood is employed to-day very extensively in diagnosis. The reaction of the different serums upon bacteriæ as manifested in the many infectious diseases, viz: Malta fever, cholera, anthrax, dysentery, plague, and typhoid fever, is invaluable.

The Widal reaction of typhoid fever as a means of diagnosis occupies a very necessary place in the obscure and irregular cases. There are different opinions as to the serum dilution and the time for clumping in typhoid fever, but 1-20 dilution with a time limit of one hour appears to be satisfactory, although a higher dilution, 1-100, may be necessary to make the test absolutely certain.

The blood of 95 per cent of all cases shows clumping during the course of the disease. I shall not enter upon serum pathology and its relation to immunity, natural and acquired, or to bacterial dissolution, agglutination, and immunization, or the hemolytic reaction of the

serum of one animal upon the corpuscles of different species. Time would forbid such an extended discussion. Neither shall I enlarge upon the diseases in which a blood analysis would aid materially in making a diagnosis after mentioning the spirochete of relapsing fever and the filaria; however, I shall give a brief review of the disease the profession dubs malaria. It very appropriately falls under the title of this paper, as Lavarán about twenty years ago found in examining the blood that malaria was not due to mal-air but to a protozoan parasite, the lowest form of animal life.

This parasite completes the circle of its development in the red cell, and has also a cycle in the mosquito by which malaria is conveyed from one person to another. It is, therefore, an infection, and, like all infections, requires an agent to spread the disease. Vincent has observed cases in which the transmitting agent seemed to be plant lice and the pollen of plants. The blood shows the various stages of the protozoan development from the bright amboïd jelly dots throughout pigmentation and sporulation. The spores are divided into the sporocytes and the gametocytes, the sexual spores. The sporocytes multiply and develop in the red cell to rupture into the blood, and again multiply and repeat their invasion of the red cell *ad infinitum*. The gametocyte does not undergo any further changes in the human body, but completes its cycle of development in the mosquito in about twelve days.

These cytes produce male and female spores, and these coalesce to form a new creature, the zygote, which divides into spores that have the power to move about till they reach the blood circulation, and are then carried to the salivary glands of the mosquito, ready to be injected into another person to begin a new cycle of malarial infection. The blood reveals all these stages, and also the different malarial parasites by which we can differentiate the quotidian, tertian, quartan, and estivo-autumnal fevers. The protozoan parasite excludes many diseases, such as tuberculosis, meningitis, endocarditis, and typhoid infection, from malarial fever.

It has not been my intention to give a minute blood analysis of the above-mentioned diseases, but only a general outline of the more common pathological changes that attend them, by which a diagnosis is made easier and often certain; neither shall I, with due respect for your patience, continue any further discussion of the diseases, the hematology of which is of less diagnostic value than in the diseases I have just recited.

INSTRUMENTAL AND OPERATIVE OBSTETRICS.*

BY ARTHUR T. M'CORMACK, A. B., A. M., M. D.

Late House Physician to the Patuxen General Hospital, and Surgeon-General of the Kentucky State Guard.

I feel that the Society will pardon the natural timidity of a young man in dealing with this subject—one of the broadest and most important in the whole range of our duties as doctors; and if your essayist falls short in an attempt to briefly outline our duty in those too frequent cases of labor which call for operative interference, he trusts that a part of the blame, at least, will be attached to the honorable Committee on Topics, which has assigned him this task.

Beyond question our most important duty as the guardians of child-birth is the preventing of instrumental and operative obstetrics; and it is here, physicians of Kentucky, that our neglect of our patients is most patent and most alarming. It is no sufficient answer to this indictment to say that pregnant women only call on medical men when labor begins, and that this is too late to ward off many of the more serious conditions concomitant with labor. The ignorance, stinginess, poverty, or mock modesty of husbands and wives may be pleaded as extenuating circumstances, but the burden of the charge is on us doctors, and it is to our indecision, lack of knowledge, or neglect that most of the faults of our patients are due. Every woman pregnant for the first time should be examined at least once a month during her pregnancy. After the third month a quantitative estimation of urea should be made monthly, and after any marked diminution in daily quantity, this should be repeated much oftener. Within the limit of the first three visits the external diameters of the pelvis should be measured accurately and recorded. These measurements should be confirmed at some subsequent time before the sixth month, and the internal conjugate should be worked out by some such table as the excellent one prepared by Dr. P. A. Harris.† In case marked deviation from the normal condition seems indicated, the patient should be anesthetized and the conjugate accurately measured. While actual labor is the only absolute test of the sufficiency of pelvic diameters, much is to be gained by a foreknowledge of their measurements. At times, when they are entirely out of proportion, owing to a small head

* Read before the Kentucky State Medical Society, May, 1901.

† Am. Gyn. and Obstetrical Journal, August, 1900.

labor progresses naturally to its termination, but usually this is not the case; and accurate pelvimetry is an essential to safe obstetric practice.

On the other hand, the writer thinks it is as serious an error to treat every pregnant woman as a "surgical case with pathological possibilities." If your patient's pelvic measurements are all right, and monthly tests show no diminution in the early excretion of urea, the old adage "Meddlesome midwifery is bad" is a whole truth, and our whole duty is to encourage her to the best physical and mental development possible for an approaching labor for which the auguries are all bright.

It is not within the province of this paper to deal with threatened or present eclampsia, nor with the various forms of dystocia, except in so far as operative measures are applicable for their relief.

Premature labor should be induced in those cases of pelvic deformity where the conjugate is three inches or less. The operation should be done between the 240th and 250th day from the cessation of last menstrual period, rather earlier than later. The prognosis for mother and child should be very guarded. For the elective cases, Krause's method, the introduction of a well-oiled bougie, under strict asepsis, through the cervix, and well up between the membranes and the uterine wall, and the subsequent tamponage of the vagina with iodoform or plain sterilized gauze, is usually the most effective and the safest.

Premature labor should also be induced in cases of the pernicious vomiting of pregnancy, before the secondary anemia has progressed too far; in convulsions before labor, or in the presence of a tremendous fall in the percentage of urea which can not be readily corrected; or when the mother's health is in such a state from intercurrent disease that it is hopeless to carry her fetus to term. I may add in this connection that I believe it our plain duty in some eclamptic cases which have recovered and become reimpregnated before the general health is fully re-established, to terminate pregnancy during either the abortive or premature period if there be the slightest threatening symptoms of recurrence of the trouble from the kidneys. Before suggesting to the patient or her family the induction of either abortive or premature labor, except in cases of absolute emergency admitting of no delay, every reputable physician should insist on consultation, not only for its value to the patient but for the protection of his own reputation.

Internal podalic version is probably indicated more frequently than any of the other more serious operative procedures. I am inclined to think that it is the most neglected of them all in practice. In this day of multiplicity of mechanical devices, manual dexterity is seemingly becoming a lost art. This is particularly unfortunate in obstetrics, for version is much easier to perform than either of the operations with which it comes in competition. Dr. Marx, of New York, recently said before the Academy of Medicine: "All positions, good or bad, which persistently remain above the brim, and which are not readily correctible by various measures, should call for an elective version." Add to these practically all cases of placenta previa, and all cases of eclampsia coming on before the head is engaged, as well as all persistent cases of prolapse of the cord. In many of these cases, as well as in a smaller number of those in which high forceps are indicated, the os will have to be dilated artificially. I feel confident that it is always better to do this rapidly, and that the method of election is the introduction of the fingers in succession, giving them a powerful twist on themselves as each one is introduced, after the manner described at about the same time by Marx and Harris. It is well to remember in all cases demanding rapid dilatation of the os and version, that, unless the subsequent delivery be rapid, there is danger of a recontraction of the os, and of much consequent trouble in delivering the aftercoming head. It is of equal or even greater importance that much of the force necessary for the delivery of the child be made *a tergo* by pressure over the fundus, and that the legs be used but little as a tractor, but more as a handle to guide the body and head. In dorso-anterior positions the near foot should be seized and pulled down; in dorso-posterior positions, the remote foot. In the harder cases little time should be wasted seeking this or that foot, but the one with which your hand comes in contact soonest should be extracted first.

Forceps should very rarely, if ever, be applied before the head is engaged. This should only be done when some emergency demands a rapid delivery, where the head is proportionately small, with a fully dilatable os. The application of high forceps is probably the most difficult obstetric operation, but it is shorn of much of its danger to the mother by the method of rapid and complete dilatation of the os above mentioned. Its greatest danger to the child is from the necessarily prolonged compression of the head when traction is made. This is obviated to a certain extent by intermittent tractions, loosening the

blades between each pull. It is almost entirely obviated by the use of axis traction forceps, but in the use of the latter one must remember to keep the handle near the handle of the forceps when making traction, and not pull down away from the handle, but the traction handle should not actually touch the forceps.

There may be cases in which an elective symphysiotomy is indicated, but I feel satisfied it should never be done as an emergency operation. Where a pubic separation of two and a half inches will sufficiently increase the diameter to permit the birth of a healthy child, this operation may be done, but the writer believes it is an unsafe procedure, unscientific, and frequently followed by conditions much more horrible than death itself. In a certain percentage of cases the child is lost, and the mother, if she recovers, has submitted herself to a convalescence almost every moment of which may be torture.

Cæsarean section, on the other hand, in cases of dystocia due either to malformation of the pelvis or a clean tumor low down, blocking either brim or outlet, has been shorn of most of its dangers in this age of surgical cleanliness, provided resort is had to it before prolonged labor pains have exhausted the mother, and provided further, always, that the child is in good or at least fair condition. Neither uterus, ovaries, nor tubes should be removed at the time of the operation unless diseased, or unless the deformity is so great that further conception should be prevented. Practically the Porro operation adds but little to the danger of Cæsarean section, and it should always be resorted to if diseased condition warrants it. In this case any healthy ovarian tissue should be allowed to remain *in situ* in order to prevent premature climacteric with resulting neurotic disturbances. Clinically it is important to remember that a rise of pulse and temperature is frequently noted on the second or third day following marked contraction of the os and retained secretions. This should be provided against by dilatation of the os from above, the vagina of course having been asepticated prior to operation, or should be corrected by dilatation subsequent to the operation if necessary.

Craniotomy is justifiable only if you are called in so late as to find a dead or dying child, or if the prolonged application of forceps has made the nervous derangement of the child probable, or in the presence of recognized fetal malformation or deformity, or if a more scientific and humane operation be absolutely refused. No more rigid asepsis is demanded in any condition which we meet than in craniotomy, and

it is important to watch carefully the mental as well as the local condition of your patient following its performance.

Of course all these remarks are cursory and general in their application. Every obstetric case, as is every woman for that matter, is a study and a law unto itself, and what I have said has failed of its object unless it has impressed upon you the fact that we should undertake to manage no case of obstetrics unless we have sufficient knowledge of the general subject and enough armamentarium and technique for each particular case. In no class of cases is expert consultation more frequently demanded early in the action, or more frequently delayed until too late. Physicians should be blamed much more for delay in these cases, for the knowledge and experience necessary in ordinary cases is easier to acquire than in cases even of appendicitis, ectopic gestation, or strangulated hernia, which latter they see so rarely as to make a little excuse for ignorance of them. When you have a labor case which is not progressing in the correct manner and with ordinary speed, apply the proper remedy if you know it, but have no hesitation in sending for the nearest man who can assist you, and send quickly before your patient and the little life she has worked so hard for nine months past to bring into the world have both succumbed to your procrastination. In all the operative and instrumental procedures to which I have referred in this article, symphysiotomy and some craniotomies excepted, the prognosis for mother and child is good if resort is had to them early, but it grows worse in algebraic proportion with each hour's delay.

Now a word in regard to the so-called minor obstetric operations, such as the introduction of the catheter or of tampons, and the giving of douches, and there are none more important than these minor operations, before discussing perineal and cervical lacerations and their repair. Each of them is so easy and safe, when properly performed, that it is almost entirely inexcusable to have infection following them. Absolute, unqualified cleanliness is a prerequisite to the performance of these operations, and the man who will examine even a gynecological patient, and much more the one who will resort to any procedure whatever with an obstetric one, without first thoroughly cleansing himself, has no place in the ranks of modern doctors. Men doing obstetric work really ought not to wear hair on their faces, but if desire for personal adornment leads them to do this, they should certainly tie slightly moistened clean gauze over their beards and mustaches before

attending even a normal labor. But, above all things, they should *wash their hands*. I do not mean to take a little pan with a dipperful of water and one of these little round cakes of artificial soap and remove the superficial layer of black from your hands, but call for bowl after bowl of water, if running water is not accessible, and if you haven't some good liquid soap in your bag, take sapolio, or better still, old-fashioned lye soap, and scrub your hands and nails and arms until the skin is soft and clean, *really* clean.

The catheter should never be introduced until the vestibule has been thoroughly cleansed, and, without exception, the vulva should be exposed and the instrument passed during direct inspection. Patients should be catheterized prior to all major obstetric operations. This is a matter of so much importance in the prevention of vesico-vaginal fistula that McLane insists that every doctor should keep a catheter tied to each pair of his forceps; after the labor, if the patient is in good condition, she should be allowed to get up and use the commode. This permits the passage of retained clots and detritus. If the labor has been very severe, however, or if a major operation has been performed, or if the perineum is lacerated, the patient should be kept in bed and the water drawn every six or eight hours, under the strictest asepsis possible.

Just here I wish to express unqualified condemnation of the procedure sometimes adopted of the introduction of a vaginal tampon in cases of placenta previa, and allowing it to remain in place until strong labor pains are induced. In addition to causing sepsis, such a procedure weakens and harasses a patient already in enough danger. In the presence of placenta previa the os should be dilated rapidly by the manual method, and internal podalic version should be done as quickly as possible. After such operation, and after all other labors in which the loss of blood exceeds one pint, a pint of hot normal saline solution should be thrown into the bowels every hour or two until it is no longer retained.

In giving intra-uterine douches, the vulva especially should be carefully cleansed, and the nozzle should be introduced into the os, if possible, without touching the vaginal wall. In threatened post-partum hemorrhage, unless the cervical or uterine artery is torn, a hot vaginal douche will usually control it. Should it fail, immediately give a large douche of a hot 2 per cent solution of acetic acid, or, if this is not available, of one part of good vinegar to five parts of hot water

(116° F.) I have never seen this fail to produce a good contraction of the uterus, but it will occasionally have to be repeated once or twice.

Probably no part of obstetrical technique is so important as thorough provision for the repair of lacerations of the cervix and perineum. No operation that we are ever called upon to do is simpler than the repair of an ordinary tear of the cervix, or one of the perineum which does not extend into the sphincter. A doctor is culpable, and should be held so, who does not actually see the genital tract as far as the os uteri after every labor. In the swollen and abraded condition of the parts, touch, however erudite, gives little idea of the true state of affairs. When you are examining your patient immediately post-partum, do not be satisfied, either, with the continuity of the perineal skin, but look well up into the fornices, and be sure that there is no laceration of the vaginal floor at any point.

Should the cervix be lacerated at all, the fresh edges should be thoroughly cleansed of clots and carefully brought together by either interrupted or continuous suture of chromicized catgut. Be especially careful to have mucous surface opposed to mucous surface at the os, so as to keep the canal patulous.

If the vaginal tear extends up into the fornices, the edges should be brought together by sutures of chromic gut running below the bottom of the tear. These should be brought to an inch of the labia, and the perineum itself should be restored by silkworm gut or silk sutures, entering and coming out on the skin and extending deeply behind the tear. Wash out all clots, and do not tie the sutures too tightly or they will cut out. Have the nurse keep the wound as dry as possible. This can probably be done best by dusting it frequently with markasol, as recommended by Goelet. If the tear is a deep one, but does not include the sphincter, it is usually better to put in a few buried sutures of No. 1 chromic gut before introducing the external sutures. If the tear is through the sphincter but does not extend into the rectum, the retracted edges of the sphincter should be brought out with a tenaculum and carefully united by interrupted sutures of chromicized catgut. The remainder of the tear should be closed as above. If the rectal wall is involved, it should be united by sutures, preferably of iron-dyed silkworm gut, placed close together, passing through all the rectal walls. The torn ends of the sphincter should be coapted very carefully with sutures of buried gut. The external perineal tear should then be united with deep sutures of No. 26 silver wire or of medium silkworm

gut. In removing the rectal sutures, which should be done in eight or ten days, Chambers suggests that the patient be put in exaggerated Sims' position and the smallest size Sims' speculum be used to retract the posterior rectal wall, so that the sutures are readily accessible.

Nothing we do is of more importance than these cervical and perineal repairs, and it would be much more creditable to the profession if more of them were done immediately after labor. Years of invalidism would be saved to thousands of women if every doctor insisted that lacerations of genital structures should be repaired immediately upon their discovery.

BOWLING GREEN, KY.

FOREIGN BODIES PASSED FROM THE RECTUM.*

BY W. O. ROBERTS, M. D.

Professor of Surgery and Clinical Surgery in the University of Louisville, etc.

Two weeks ago a gentleman came to my office complaining of pain in the right side of his abdomen. The abdomen was quite tender to pressure. There was no marked resistance, however, about the muscles. He had no fever, nor was there any distension of the abdomen. I advised him to go home and take a purgative. I was called to see him the following morning, and found him very much nauseated. He told me that the night before he had taken three doses, one-quarter grain each, of the sulphate of morphia, and that morphia always nauseated him. Nausea was so marked that he could not retain the smallest quantity of water. He still had great pain and tenderness over the right side of his abdomen. No distension. I ordered a hot-water bag to be laid against his side. He had no elevation of temperature. That night about 7 o'clock I received a telephone message stating that he had shortly before had an action of the bowels which contained a great deal of blood, and after the action he felt greatly relieved, though he was still very much nauseated. The following morning I was called out of the city, and another physician saw the case for me. Upon my return I was told that the patient had suffered considerable pain, but there was no elevation of temperature, and he had one action of the bowels which contained blood. He was still nauseated from the morphia taken two days before. I saw him

* Reported to the Louisville Clinical Society

the next day about noon; there was still considerable tenderness and pain over the region of the right side, and he told me he had a bloody action that morning. I was at a loss to account for his symptoms. He was a medical student, and I believe a truthful man. He had never been sick in his life before. His urine was rather highly colored, and I had it examined microscopically, but found nothing abnormal except a slight increase in the urates. I put him upon citrate of lithia tablets. I did not see him again for two days, when he came to my office and told me that he could account for the hemorrhage from his bowels, and showed me an ordinary steel pen which he had passed per rectum that morning. I asked if he remembered to have swallowed it, and he said no. The following morning he had an action from the bowels, and felt something sticking into his rectum which gave him pain, and his room-mate removed another pen exactly like the first one from the rectum. Since then the patient has had no trouble.

Discussion. Dr. W. H. Wathen: The case reported is very unusual, and reminds me of a case in which a silk ligature that I put on the left side of the uterus in removal of the appendages over a year ago, passed out a few days ago through the bowel. In this case the ovaries were diseased, and the uterus wedged down into the pelvis. I performed a laparotomy, removing both ovaries and tubes, and fastened the uterus in front. She had no further pain, nor did she have any of the symptoms referred to the pelvis which had previously existed, but some pain continued in the left inguinal region.

Day before yesterday she came to my office and handed me a double ligature that came from the rectum the previous day. It had passed from the pedicle to the bowel, evidently from infection due to the bacillus coli communis. The bowel being probably diseased before the operation, the bacillus passed through in the vicinity of the site of the ligature, causing adhesion to the bowel, and finally by suppuration the ligature passed into the bowel. There was following the operation, so far as could be discovered, no pus. She had no elevation of temperature, there was no pus in the wound, and she made a speedy recovery. The first evidence that I had that suppuration existed, or that infection took place, was when she presented the ligature day before yesterday. She says that since the ligature passed from the rectum she has had less pain in the inguinal region.

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INDISCRIMINATE SURGICAL OPERATING.

Nothing impedes surgical progress so much as indiscriminate operating. There are two classes of indiscriminate operators: those who operate solely for pecuniary reasons, and those who operate because of a mania to do surgical work. These men do not hesitate to plunge the knife into any person, under any circumstance, regardless of consequences. The latter class is largely in the minority, but the dangers are relatively as great, for many of them have no control over themselves, and operate upon cases which the most insignificant tyro should be able to see were inoperable. This reckless surgery can not last long under the glaring searchlight of the public eye, because the American people are alive to the fact that there is a great deal of unnecessary operating done, and will not be slow to rebuke the men who do this indiscriminate work. These parasites of the profession are constantly on the alert for business, and some of them have gone so far as to adopt and advertise that abominable practice of fee-splitting to secure business. This has resulted in much unnecessary operating. A brings B a case supposed to need some kind of surgical work; B examines patient; A has already notified him that there is a fee of one, three, or five hundred dollars for any operation; that these people are able and willing to pay liberally to be rid of the trouble, whether imaginary or

real. The result is, if the patient be a woman with abdominal trouble, they will remove the ovaries and collect the fee. If it is not a case of so much gravity, there will be some arrangement made by which the fee can be secured all the same, possibly an exploratory operation, and the fee collected. It may be simply leucorrhea, which could be cured by proper medication. The pseudo-gynecologist or surgeon examines the woman, looks wise, and says to the patient and doctor that nothing but curetting will cure her. The husband will stand nonplussed at the technical phrases, while the poor woman shivers in mortal terror, awaiting the decision and explanation of what curetting means. Finally the woman is anesthetised, and in many cases the lining of the healthy womb is torn and lacerated in an unskillful manner by the curette in the hands of a man who is illy fitted to do such work, for there is no more dangerous and difficult work in surgery than curetting, and yet every cross-road surgeon is ready and willing to attempt it. No less authority than Dr. John B. Deaver has classified curetting of the uterus as one of the three dangerous operations, which are considered harmless by many physicians and surgeons.

The evil results of indiscriminate work are manifested in many ways; women are unsexed unnecessarily, abdomens are opened unnecessarily, livers are cut into that should not be touched, and humanity is maimed in a thousand ways and no benefit gained, and even death is frequently the result of these operations. It has not been many months since a pregnant uterus was cut into in this vicinity, but I am glad to say that the surgeon did not live in Louisville. This woman died. It would seem in this enlightened age that no man is excusable for opening a pregnant uterus without knowing that it was in that condition before doing so. There are but few conditions where the demand for exploratory operations are warranted, and in this case certainly the fetal movements could have been detected, as we understand the woman was five months pregnant. This case is mentioned to illustrate the extremes to which this reckless operating is carried. This young man, no doubt, had been emboldened by success in a case or two, and probably had he listened to his advisers this accident would not have occurred. We write this to admonish these reckless and indiscriminate operators. Davy Crockett's advice is good, "Be sure you're right, then go ahead." But do not fail to take all precaution necessary to insure the fact of being right.

The foregoing in no sense applies to the many learned, experienced, and honorable surgeons and gynecologists in this country.

Current Surgical and Medical Selections.

RHEUMATISM.—Stengel (Medical News) remarks, after studying the bacteriologic nature of rheumatism, that it is important to recognize several fundamental facts as regards treatment: First, the tendency in many cases toward spontaneous recovery; second, complications, such as endocarditis, pleurisy, pericarditis, etc., are frequent and more likely to occur in protracted cases than in those of short duration; third, the complications are probably, as a rule, secondary to joint disease and not to the infective lesion—such as tonsillitis—that was the primary focus, consequently the severity of the local joint lesion bears a relation to the likelihood of the development of the complications. He states these facts as probable, not as absolutely proved. Of the drugs used in the treatment of rheumatism, the salicylates hold the first place, and if they are not specific in their action they at least relieve pain. He also mentions as another valuable method, fixation by splints of plaster, which he thinks is often the best method of producing rest for the parts. He has used the plaster cast considerably in gonorrheal and polyarticular types, and thinks its beneficial effects are immediate. In polyarticular rheumatism it has been most useful when the knee, elbow, and ankles have been affected. The wrists and smaller bones can be managed with splints and in other ways quite as satisfactorily. In some cases of rheumatism, where rebellious to treatment with the salicylates and rest and the general condition is unsatisfactory, tonics are advisable, and in a number of cases of this sort he has employed small doses of bichlorid of mercury with good result, and attributes this to the tonic influence of the drug. It seems to be of value as a stimulant of hemogenesis or as a tonic, not as an antiseptic. Other tonics may be of use, such as iron; strychnia and the iodids are of undoubted value in some chronic cases. In conclusion, he mentions the serum treatment, and he has made a few trials of antistreptococcic serum in cases of obstinate rheumatism in which improvement soon followed the injection. The dose was one third the customary amount employed in streptococcic infection, and the remedy was administered every other day for a week or more, when ordinary treatment was resumed. While conclusions would be rash from this limited experience, he thinks the method deserves further trial.—*Journal American Medical Association.*

DIET IN TYPHOID FEVER AS SUGGESTED BY TYSON.—At the meeting of the Medical Society of Pennsylvania Dr. James Tyson, of Philadelphia, the well-known author of *Tyson's Practice of Medicine*, presented a paper (Penn. Med. Journal) on "Diet in Typhoid Fever." After dwelling upon the value of milk, plain or peptonized, animal broths, etc., the paper concludes with the declaration that it is most important to establish correct

notions as to the transition from the diet of one actually ill from typhoid fever to that suitable to convalescence. "With a view to simplicity in instructions to nurses and young physicians," says Dr. Tyson, "I lay down quite an arbitrary rule, of which it may be said that if it errs, it errs on the safe side. This rule is to adhere to liquid food in the shape of milk or broths, beef juice or albumen water, until the temperature has been normal one week. Then I allow a single soft-boiled egg. If nothing happens in twenty-four hours after this, I allow an egg daily. If after two or three days every thing goes well, I permit a small dish of very soft milk toast, tentatively at first, as with egg. If all continues well, a small quantity of boiled rice or of strained, well-cooked oatmeal is added. Next a small piece of steak may be chewed, or, if in season, two or three small raw oysters. And thus one article of food is added after another until a reasonable mixed diet is taken. Chicken is one of the last foods allowed. Even earlier than at the end of a week of normal temperature a raw egg may be given mixed with milk, or perhaps a little sherry or whisky to flavor it if the patient complains of being hungry or it is thought he is not being sufficiently nourished. I do not deny that there are articles of food that may be given with safety, but as they furnish no needed elements of food over and above those of milk, and I do not feel assured they are actually as harmless, I do not think it right to take the risk except for some extraordinary reason. Under such circumstances I reserve the right to make such changes as common sense dictates. I am sure, for example, I have seen fever arise after the allowing of a soft-boiled egg at a date earlier than that mentioned."—*Richmond Journal of Practice.*

COINCIDENCE OF PREGNANCY AND PURPURA.—Loebell (*Der Frauenarzt*) had recently an opportunity to study the complication of purpura with pregnancy. Previous opinions as to this coincidence have differed widely. Philipps, for example, sees in the purpura of pregnancy a harbinger of death of the fetus and even of the mother through post-partum hemorrhage. But Schauta maintains, on the other hand, that the hemorrhagic diathesis exerts no influence on pregnancy.

The patient in question was thirty years of age, the mother of two children. She had already suffered from menorrhagia, for which no adequate cause could be found and which had brought about anemia. Pregnancy appeared to interrupt this state of affairs, and the patient was then ordered to especially avoid physical exertion, which order she violated by taking a long bicycle ride. Uterine hemorrhage promptly reappeared, and rest in bed was ordered. The patient continued to disregard the orders of her physician, and in addition to the metrorrhagia, which was persistent, symptoms of a general affection became apparent. There were pains in the joints of the lower extremities, epistaxis, blood-tinged saliva, and, finally, purpuric spots and ecchymoses. Abortion set in on the fourth day of the general disturbance. The purpuric phenomenon disappeared after a short course of moor baths.—*Obstetrics.*

SUBSTITUTE INFANT FEEDING.—H. D. Chapin (The Journal of the American Medical Association). The article is similar to those recently written by the author, whose aim it is to secure clean, fresh milk for the home modification necessary to make it a suitable food for infants. The prompt and rapid aeration of milk with proper cooling are matters of importance. There is practically no bacterial growth when milk is kept below 50° F.

When milk is delivered in bottles which have been filled at the dairy, there is a good quantity of cream from the "deep setting" that has taken place.

By the use of a dipper devised by the author, it is possible to separate the cream and mix it in any proportion desirable. The fat in the first nine ounces from the top of the milk averages from 9.2 per cent to 14.6 per cent, according to the richness of the milk. The cream may be diluted to get the proportion of fat desired.

As a diluent dextrinized gruels are found useful.

If the milk is clean and has been kept cool, it is unnecessary to pasteurize it, but in the summer time, when it is impossible to keep milk below 60°F., it is best to have it pasteurized.

The character of the stools that indicate the need for a withdrawal of milk for a time is described, and suggestions are made of articles suitable for temporary use in infant feeding.—*The Archives of Pediatrics.*

THE RESULTS OF THE BOTTINI OPERATION IN HYPERTROPHY OF THE PROSTATE.—Freudenberg, who has been mainly responsible for the popularity of the revised Bottini operation since he devised instruments for its safe performance, and demonstrated by a large number of cases its efficiency, has published a paper in the *Wiener Klinische Rundschau*, No. 46, 1900, embodying the results of a statistical study. In all he has collected 753 cases of the operation, with forty-four deaths—a mortality of a little under 6 per cent. Of these forty-four deaths there were but twelve which reasonably could be attributed to the operation, leaving a mortality of 4.25 per cent.

Of 718 cases in which the results as to cure were stated, 622 were either improved or cured—that is, 86.63 per cent; of this proportion, 61.3 per cent were cured, and 38.7 per cent were improved. There were fifty-five failures—7.66 per cent.

Freudenberg himself has now performed the operation eighty-six times on sixty-nine patients, seventy-eight times with the incisor and eight times with the cauterizer. There were four deaths shortly following operation, two incident to imperfect technique. Two other patients died within two months of the operation in consequence of a long-standing pyonephritis. There were no cases of death in patients with intact kidneys.

Freudenberg's operative mortality is 5.8 per cent, a little higher than that from his collected statistics; but this is to be explained on the ground

the quantity entering the circulation guessed at. The most urgent need of the patient is for the immediate, unlimited administration of antivenene.

It would be a wise precaution for persons whose travels or occupations keep them in continual danger of snake-bites to provide themselves with the remedy and carry it with them, so that the emergency can be immediately met. To those who live in towns and in the well-settled districts of our country, this may seem like an extreme precaution; but there are many whose occupations of berry-picking, lumbering, mining, hunting, engineering, etc., carry them into wild and snake-infested countries, to whom the possession of a snake venom antitoxin with even a limited application would come as a boon.—*Ibid.*

PUERPERAL GANGRENE OF THE UTERUS.—Buckmann (*Ztschr. f. Geburtsh. u. Gynak*, Stuttgart, Bd. xlii. Heft 3) has collected over forty cases of this disease, which he regards as more frequent than is generally supposed. He observed ten cases in the St. Petersburg Klinik in three years. It is caused by streptococcic infection; the organisms, crowding on the endothelium of the blood-vessels, produce thrombi and necrosis of the corresponding part of the uterine wall. The healthy uterine tissue is separated from the infected areas by a clear line of demarkation. Such cases may recover, but in the absence of such a line of separation the gangrenous process becomes more extensive, and the case ends fatally from sepsis. In addition to the ordinary signs of sepsis, there are to be noted the following points in diagnosing the condition: Immediately after delivery, the uterus remains enlarged, for about three weeks. The discharge, at first blood tinged, becomes coffee colored, then dirty yellow, finally becoming very fetid and purulent. By the fourth week the necrotic tissue becomes separated, and the discharge and febrile condition subside. The condition is frequently associated with inflammatory edema in the region of the posterior commissure and perineum. Of forty cases, twenty-seven died, the cause of death being peritonitis following perforation of the uterus, or general sepsis. In the treatment of this disease, Buckmann recommends free stimulation, with vaginal douching, but warns against any intra-uterine treatment on account of the great risk of perforation of the uterus.—*The Edinburgh Medical Journal.*

Special Notices.

CHEMICAL FOOD is a mixture of Phosphoric Acid and Phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. The Robinson-Pettet Co., to whose advertisement in this issue we refer our readers, has placed upon the market a much improved form of this compound, "ROBINSON'S PHOSPHORIC ELIXIR." Its superiority consists in its uniform composition and high degree of palatability.

I HAVE used Aletris Cordial for menorrhagia and dysmenorrhea, and find it an invaluable remedy as a uterine tonic. The aletris farinosa has for a number of years been a great favorite with me in derangement of the female reproductive organs, therefore I recommend it as a tonic in uterine troubles, as it will give satisfaction to those afflicted with such diseases.—*C. A. Goshen, M.D., Petaluma, Cal.*

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"NEC TENUI PENNĀ."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

THE CURE OF ENURESIS.*

BY PHILIP F. BARBOUR, A. M., M. D.

Wetting the bed is one of the lesser ailments of children that produces more discomfort than many more serious diseases. Enuresis is normal in the infant, and it is only as the child grows older and more intelligent that the discharge of urine ceases to be involuntary and comes under the control of the inhibitory centers in the brain. The time at which the psychic centers become developed sufficiently to control the activity of the sphincters and inhibit the action of the detrusors varies with the inherited mental and physical qualities of the child, and also to some extent with the general intelligence and fitness of the nurse or mother. If, however, the child has not by the end of the second year learned to control the movements of its bowels and bladder, some local disease may be present, or there is an undevelopable brain from porencephaly, imbecility or allied nerve lesion.

It is not my purpose, however, to devote much attention to obvious causes of bed-wetting; the causes where discoverable should, if possible, be removed. But the number of causes that have been adduced to account for enuresis is equaled only by the number of remedies which have been suggested for its relief.

In the great majority of such cases, however, one is unable to discover any causal factor. The very fact that so many different conditions have been cited as producing enuresis, whereas the same conditions when

* Read before the Kentucky State Medical Society, May, 1901.

present in other children do not produce it, should remove them from the group of exciting factors, though they may substantiate their claim to be numbered among the predisposing causes. Any predisposition should, of course, be counteracted, and that phase of our subject will receive brief attention.

Cases of enuresis are those which usually without any assignable reason wet the bed at night. The urine is offensive in odor and frequently alkaline in reaction. It stains the night garments or bedding brown, and rots the bedding very rapidly. It is not clear, but contains floating particles which under the microscope are of an indeterminable nature. The bacteriology has not been worked out, though the offensive odor to the urine would indicate some abnormal change in it, such as most frequently results from the growth of micro-organisms. As the urine varies from a highly acid to a highly alkaline reaction, it is hardly possible that the same organism is present in all cases. Indeed, it is highly probable that there are a number of bacteria which may produce such changes in the urine as to render it highly irritant to the normal mucous membrane, and which thereby induce a sensitive condition of the bladder, which is suggested as one of the explanations of the phenomena of enuresis.

The great frequency of enuresis and the absence of any determinable cause in most cases has led us to infer that the most frequent cause has not been ascertained, and especially that it is not a neurosis only.

The inefficiency of the usual treatment in ameliorating this common disease has led many to strive in an empiric way to secure some more brilliant and certain results than have obtained under any of the drugs which have been advocated for it. A large outdoor clinic has furnished me with the opportunity of trying all drugs recommended for enuresis on a great number of cases, and the simple treatment which I have learned to rely upon has been gradually evolved and confirmed by most satisfactory results in over one hundred cases in private practice and a large outdoor clinic. My predecessor in the Hospital College of Medicine, the late Dr. John A. Larrabee, was an earnest advocate of belladonna in all cases of enuresis, and I have records of over fifty cases treated by that drug. Belladonna has been highly lauded by all the eminent pediatricians of this country. They find it to be almost universally applicable. Some prefer atropine on account of the definite strength of the alkaloid and the exactness of the dose, and the certainty of its therapeutic action. My experience with it has not been favorable. It has to be used in such

large, almost toxic, doses as to border on the danger line. The effects of such large doses are so unpleasant and so alarming often that many have been anxious to secure some drug which was less toxic and more effective.

Holt recommends increasing the dose of atropine, so that a child, aged five, may take one one-hundredth of a grain of atropine at 4, 7, and 10 P. M., and in a footnote gives his experience as follows: "Twelve obstinate cases, in none of which could any local cause be found, were treated by Dr. Kerley, then resident physician in the New York Infant Asylum, in the manner indicated. After five months' treatment seven of the cases were so much improved that incontinence rarely occurred. The atropine was, however, continued in smaller doses for four months longer, at the end of which time the cases were well. In the remaining five cases but little improvement was seen after five months' treatment, and not until the end of ten months could it be said that much improvement had occurred. In these cases the drug was continued for two months longer and all treatment discontinued, as the cases were cured." Prof. Holt very correctly adds that "in dispensary and private practice the want of early success would have deterred mothers from continuing the medicine."

Strychnine is indicated in those cases in which there is a general relaxed condition of the muscles, and it is of benefit by its systemic action. Ergot is sometimes combined with it when the sphincter of the bladder is too weak, but it will upset the digestion and is of little assistance. To mention the other forms of medication very briefly: Iron in the form of syrup ferri iodidi is of use in the anemic cases, especially as lymphatism is considered an etiological factor, and adenoids are often present. General attention should be given to the diet and to the regulation of the intestinal digestion and peristalsis. Such evident causes as worms, balanitis, phimosis, highly acid or too concentrated urine, vesical calculus, congenitally small bladder should receive their appropriate treatment.

Punishment never accomplishes any good, and though some believe in a form of suggestive therapeutics, it is difficult to understand how a child as sound asleep as these children usually are when they wet the bed can be affected mentally by suggestion or by threats of punishment. Raising the foot of the bed by relieving the pressure upon the trigone of the bladder is sometimes of service. Rhus aromatic, epigeia, cantharides, electricity, etc., have been lauded.

A child presented itself at my clinic in October, 1896, who suffered from enuresis. The examination of the urine showed it to be unusually offensive and alkaline in reaction. Desiring to acidify the urine and knowing that the usual organic acids would only increase the alkalinity and that the minerals acids were very uncertain in their action upon the urine, I decided to use a saturated solution of boric acid, which has the property of rendering the urine acid. The results in this case were gratifying, and also in the next few cases in which I tried it. For several months then we used belladonna only. During the summer and fall I again used the boric acid, but for the purpose of rendering the urine more antiseptic, salol was added to it. Salol is broken up in the intestines into salicylic and carbolic acids, and is eliminated through the kidneys in the urine. The results from the combination were most gratifying, and the two have been used now for several years as the routine treatment for enuresis. I do not know any case in which it has failed after thorough trial, and it has been employed not only by myself but by medical friends, who have uniformly reported most favorably upon its use.

Of course it would be useless as well as foolish to claim that enuresis from every cause could be cured by the combination of these simple drugs. It is very easy to see that an abnormally contracted bladder, anemia, malnutrition, etc., would not be cured or benefited by this treatment. I do feel, however, that my experience will warrant the assertion that with the usual attention to any of the evident factors in the case, and in those cases in which no organic lesion can be diagnosed, that this simple treatment will prove satisfactory, and in addition it is practically devoid of danger and easy of administration, and can be continued for considerable lengths of time if it should be found necessary and there is no diseased conditions in the kidney.

I use the word cure in the title of my paper to mean the relief and complete disappearance of the enuresis. I do not claim that there will not be relapses, though I have seen relapses in only three cases, and the relapses came on about one year after the cure was first made. There should be no objection to this claim, for one often says he cures diarrhea, or coryza or bronchitis, not meaning that the patient will never have that trouble again. And so these cases are cured, some permanently; others from cold or exposure may have a recurrence of the attack at later and varying periods. The fact that the child has once suffered from enuresis is a factor in creating a predisposition to that trouble that almost any exciting cause may serve to initiate it again. The three cases which relapsed were easily relieved by instituting the same treatment again.

It may be that I have been unduly optimistic, so it my earnest desire to have this treatment tried by others, so that its delimitations may be established and that a more exact knowledge of its therapy be obtained. If I have seemed to claim too enthusiastically that it is curative, my extenuation is that I have found it so. I desire to have your critical trial of it, so that ultimately good may come to these young children, whose nights are otherwise so uncomfortable.

LOUISVILLE.

THE PATHOLOGY OF BRIGHT'S DISEASE.*

BY GEORGE E. DAVIS, M. D.

Pathology is the doctrine of disease and signifies a morbid change, either in exercise of functions or in texture of organs. By Bright's disease, pathologically speaking, we usually understand a morbid change in the texture of the kidneys so material as to modify or suspend their function, whose office in the animal economy is, eminently, elimination. Our discussion, on account of limited time, shall be nearly confined to this narrow field. However, we should not be deluded, for the pathological domain of Bright's disease is so broad that it involves lesions of texture and derangements of function, more or less, of the whole organism. In fact, the toxins which the kidneys fail to separate from the blood not only primarily poison the blood, but make it a vehicle to reach all the other tissues and do them injury.

An accurate knowledge of the pathology of Bright's disease is absolutely essential to interpret the symptoms and direct the treatment.

1. *Albuminuria.* Before we get true albuminuria a morbid change in the vascular walls of the capillaries and the epithelium of the tubules is absolutely essential.

Experiments have proven that increased pressure effects alone are not sufficient cause. Ligation of the aorta below the renal arteries, notwithstanding it greatly increases blood-pressure in the glomeruli, does not produce albuminuria. Why? Because nourishment is amply provided by the increased blood-supply, and while the increased blood-pressure increase the positive function of the kidney—that of secretion, it does not impair its negative function—that of preventing the escape of serum-albumin, so long as nourishment is supplied and the renal tissue remains normal. Moreover, the increased pressure in the glomeruli is

* Abstract of a paper read before the Kentucky State Medical Society, Louisville, May, 1901.

compensated for by the collateral circulation in the kidney. There are three channels by which the blood may reach the renal vein without passing through the glomeruli: First, the terminal branches of the renal artery anastomose with the stellate veins beneath the capsule, on the surface of the cortex; second, branches direct from the interlobular arteries, together with branches given off from the afferent arteries before they reach the glomeruli, anastomose with the venous plexus surrounding the tubules; and third, the *arteria recta* anastomose with the *vasa recta*. Through these three channels the blood-pressure in the glomeruli is relieved. However, when the renal vein is ligated we do get albuminuria. The explanation is that the blood-supply being stagnated, nutrition is deficient, and the texture of the renal structure is changed. Increased blood-pressure, under these conditions, will cause albuminuria. The pressure is first felt in the venous plexus and then in the glomeruli, and being little or not at all compensated by collateral circulation, the blood having no avenue of return to the system, the albumin that is poured out into the lymph spaces surrounding the tubules can not be absorbed by the venous plexus on account of increased internal pressure, nor can it re-enter the glomeruli for like reason, therefore it is forced into the tubules to escape with the urine. *Venous congestion*, then, does cause albuminuria, but there must first be a lesion in texture before it is operative. I wish to note here that the venous congestion of Bright's disease is due to a weak circulation. The soft, feeble pulse is what we have to fear, and not the high-tension, wiry pulse of arterio-sclerosis. The latter often is a complication, being produced probably by the same agent that caused the Bright's. The cardio-vascular change produced by Bright's is one of *degeneration*, and results in a weak heart and a soft, compressible pulse, which must not be confounded with the rigid, wiry pulse of *arterio-sclerosis* that not infrequently complicates the incipient stage of chronic Bright's disease. I wish to emphasize this differentiation.

2. *Dropsy*. The presence of fluid in the cellular tissues, *i. e.*, edema or dropsy, is influenced by three conditions: (1) Alteration in the composition of the blood; (2) alteration in the structure of the capillaries; (3) alteration in the vaso-motor nerves which control the capillary circulation. Normally there is a constant exudation of fluid from the capillaries into the lymph spaces to supply nutriment to the cells of the various tissues of the body, and after it has served this function it is reabsorbed by the veins and lymphatics. Under physiological conditions the exudation and absorption are equal, but when, from any cause, the exudation

is increased and the absorption is decreased and accumulation ensues, if it occurs in the cellular tissue it is termed edema, but if in a serous cavity it is called dropsy.

(1) Alteration of the blood, or anemia of Bright's disease, is caused by albuminuria. Serum-albumin, which is one of the most important ingredients of the blood, escapes with the urine instead of remaining to minister to the nutrition of the blood and body. The red blood cells suffer, too, for hemoglobin contains not only hematin but also an albuminous substance, globulin, and, the latter not being supplied, the blood is further impoverished. Albuminuria, then, by causing anemic or watery blood, proves a pathogenic factor in dropsy, but hydremia alone is not sufficient to produce dropsy if there is not an alteration in the capillaries first.

(2) Alteration in the texture of the capillaries, however, renders exudation through them more easy, and, after all, the main factor in the pathogenesis of dropsy resolves itself into the condition of the capillary vessels. Experiments of rendering the blood watery by intravenous injection of large quantities of normal salt solution have proven that exudation is not increased so long as the capillaries are in a healthy condition. Capillaries altered by inflammation or lack of nutrition are rendered more permeable, and then any alteration of the density of the blood by dilution is quickly manifested by increased effusion. Diluted or hydremic blood, though it does not pass through healthy capillaries more readily than does the normal blood, yet it effuses much more easily through altered capillaries than does normal blood. Therefore, albuminuria not only alters the blood, but through the blood-change alters the capillaries, and when the structures of the vessels are altered hydremia greatly increases the edema.

(3) Alteration in the vaso-motor nerves influences the pathogenesis of dropsy. Exudation takes place slowly and absorption rapidly when the vaso-motor nerves are acting powerfully ; and, *vice versa*, exudation takes place rapidly and absorption takes place slowly when the vaso-motor nerves are acting feebly. Vaso-motor weakness, then, favors dropsy in a double manner, both by increasing exudation and retarding absorption. Albuminuria causes the vaso-motor weakness by withdrawing nutrition.

To summarize the pathogenesis of dropsy we may state briefly that albuminuria, by withholding nourishment, produces (*a*) an alteration in the composition of the blood, or anemia and hydremia ; (*b*) an alteration in the texture of the capillaries ; (*c*) an alteration in the condition of

the vaso-motor nerves which control the circulation and the exudation and absorption by the capillaries.

3. *Uremia.* A full discussion of the pathogenesis of the complex, morbid phenomena of Bright's disease hidden under the term uremia, especially implicating the nervous system, both sensory and motor, and complicating the muscular, respiratory, circulatory, and gastro-intestinal systems, also involving special organs, as the eye, skin, liver, etc., can not be embraced in so short a paper. The organism in its normal as well as in its pathological state receives and forms poisons, and the renal function affords the chief means of emunction, as the kidney can eliminate all toxic products except gas. Uremia is a mixed form of poisoning due to many causes, and we can not offer one explanation alone for all the accidents of bad repute which may appear in the course of Bright's disease. Several pathogenic theories have been invented seeking to identify these accidents with certain anatomo-physiological conditions, appealing to clinical observations to justify their arguments. One investigator has incriminated urea as a cause of uremia; another has invoked cerebral edema as an explanation; some accuse ammonia; others still claim potass., coloring matters, and extractive substances, as uric acid, creatin, leucin, xanthin, etc., precipitate all the accidents of uremia. All these theories may possess an element of truth, for the most rational explanation of uremic phenomena and most in harmony with clinical and experimental observations is that they are the result of not any single element of the retained waste-products, but of the entire mass. An analysis of normal urine reveals the presence of several poisons, which renders it difficult, if not impossible, to differentiate and estimate the pathological potentiality of any particular one, two or more of these poisons that the kidney may fail to eliminate.

What is of more import to the clinician is to remember that to invoke uremia it is not sufficient that the kidney should be diseased. It is essential that there should be so great lesion of texture that its functioning power is decreased to such a degree that it can not eliminate in twenty-four hours the amount of poison which the organism forms in twenty-four hours. When we consider that the utmost capacity of the normal kidney for twenty-four hours, as compared to what it ordinarily secretes in that time, is in the ratio of about ten to one, we can appreciate the degree that it may be pathological in structure, and yet, clinically speaking, may be physiological in function. This observation emphasizes the unreliability of urinary tests alone in diagnosing Bright's disease, for a

kidney may be markedly diseased and the urine remain normal in quality and quantity. However, under these conditions, complications of other diseases might precipitate intoxication, therefore frequent urinary tests and a close vigil for other clinical manifestations are necessary if we would not reproach ourselves for serious and fatal accidents, the outcome of intoxication arising from the suppression of the renal function to which we apply the term uremia.

LAWRENCEBURG, KY.

DIAGNOSIS OF BRIGHT'S DISEASE.*

BY ANDREW SARGENT, M. D.

To me has been assigned the pleasant task of briefly setting forth the diagnosis of Bright's disease, a name that to the medical mind means albuminuria and its complications, acute and chronic, while the average layman understands it as the messenger of death. It is a term definite enough for general use, but too comprehensive for scientific or diagnostic purposes.

Acute Bright's disease, or acute nephritis, is nearly always a secondary symptom or complication of some form of septic or infectious disease, and is degenerative in character. There may be a history of cold, as in so many acute diseases, but generally it is a sequel of diphtheria, scarlatina, tonsillitis, rheumatism, severe hemorrhage, prolonged suppuration, pregnancy, and in aged persons it follows the excessive use of food and liquor without sufficient exercise.

Edema, generally the first subjective symptom, usually makes its appearance in the face under the eyes, and is rapidly followed by general anasarca. It is sudden in its onset, accompanied by pains in the back and lumbar region, great weakness, rapid pulse, loss of appetite, and marked pallor of the skin. The urine is greatly decreased in quantity, high in color, containing albumen in abundance, also blood-cells, renal casts, and epithelia.

Albumen in this form of Bright's disease may be considered as both diagnostic and prognostic factors of great importance. Chronic Bright's disease, or chronic parenchymatous nephritis, is generally a disease of advanced age, is insidious in its approach, and marks the departure of good health. The tendency to anasarca is early, prominent, and persistent. Anemia is marked with pallor of the skin. The urine is scanty and

* Read before the Kentucky State Medical Society, May, 1901.

of low specific gravity. Albumen is nearly always found at some period of the day, though it may require repeated tests to prove its presence. The microscope is of more importance than the test-tube, revealing as it does renal casts and epithelia. The pulse is rapid with high tension. Respiration is rapid with moist cough and dyspnea upon exercise. Insomnia and loss of appetite and mental depression may be early or late symptoms of the disease.

Chronic interstitial nephritis is another form of chronic Bright's disease, marked by the passage of large amounts of pale urine of very low specific gravity in which albumen is very scant or absent entirely, most frequently to be found in the first urine voided in the morning. The microscope reveals hyaline and granular renal casts and cells. The patient is far advanced in life or prematurely aged from high living, use of liquors, overwork, or mental worry. The pulse is of high tension and irregular, frequently made worse by disease of valves and arteries.

Respiration is impeded by moist râles, pulmonary edema, shortness of breath, especially marked at night.

HOPKINSVILLE, KY.

THE TREATMENT OF BRIGHT'S DISEASE.*

BY A. G. BLINCOE, A. M., M. D.

This paper is presented not because of any special fitness I feel that I possess for handling the subject, but simply for the reason that I was asked to write it and did not like to refuse the request. In its preparation I have drawn freely from the writings of others on this disease, but, as I was asked "to let my paper be just five minutes in length," I shall only endeavor to give as briefly as possible the outlines of treatment as they occur to me from my reading and experience, and trust to the able gentlemen who will follow me in the discussion to amplify the subject, elucidate the obscurities due to brevity or other causes, correct defects generally, and freely criticise any views thought to be erroneous. Were it not for this view of the matter and under these circumstances, I should scarcely feel inclined to attempt to present a paper on this subject at all.

The first and most important measure to be adopted in the treatment of acute Bright's disease is complete rest in bed in a comfortable room,

* Read before the Kentucky State Medical Society, May, 1901.

where the patient is to be kept perfectly quiet and warm with sufficient bed covering, including blankets and woolen or cotton flannel underwear, and carefully guarded from draughts of air. This, with proper attention to diet, the skin, and bowels, may be about all the treatment necessary in mild cases, and none of these measures should ever be omitted in any case.

The diet, from which should be excluded all solids, and especially meat and eggs, should at first be light and consist mainly of milk or buttermilk, to which may be added by way of variety gruels, soups, rice, oatmeal, etc., but "It is better, if possible, to confine the patient to a strictly milk diet." (Osler.) The patient should be allowed to drink freely of water or lemonade or the carbonated or alkaline mineral waters. A teaspoonful of cream of tartar to a pint of boiling water with the juice of half a lemon and a little sugar, taken cold, makes a pleasant and useful drink. "The fluids keep the kidneys flushed and wash out the debris from the tubes." (Osler.)

A saline purgative should be given in the beginning, cream of tartar or magnesia being suitable for children and Epsom salts for adults. Should the stomach be intolerant of the latter, an effervescing saline or compound jalap powder or elaterium may be given. Afterward a dose of salts or an effervescent saline each morning in sufficient doses to keep the bowels well open.

If there is pain in the back, hot fomentations or dry cups followed by poultices may be applied. Wet cups should not be used with children, and, if used with adults, all the usual antiseptic precautions should be observed. Besides being open to the same objections as wet cups, "Blisters are not advisable, as the irritant substances producing them may be absorbed and cause increased renal irritation." (Hare.)

For hematuria and scanty or suppressed renal secretion, besides the local applications to the loins already mentioned, sweating by means of the hot water or hot air bath or hot wet pack should be tried. The latter is generally more convenient, equally efficient, and less enervating than the other methods mentioned. In using it the bed should be protected by a rubber sheet over which is placed a dry blanket. Remove all the clothing and wrap the patient with a blanket wrung out of water at 110° F., and over this place a dry blanket and put an ice cap to the head to prevent cerebral congestion. If the results seem favorable, the patient may remain in the pack an hour, and the same procedure may be employed once a day as long as indicated. Should the temperature,

however, rise, as indicated by a thermometer under the tongue, and no sweating occur at the end of half an hour, the patient should be removed from the pack. One eighth of a grain of pilocarpine hypodermatically may aid materially the diaphoresis, but it is a dangerous remedy which should be used with caution if at all. It should not be given unless the pulse is strong. It may be guarded with strychnia. If there is much dropsy, the hypodermics may not be absorbed. Purgatives may also be used either alone or in combination with the sweating, as the main reliance in these cases is to produce elimination by the skin and bowels, the kidneys failing to respond to diuretics. The stimulating remedies of the latter class are inappropriate, as they act as irritants to the already inflamed organs. Alcoholic stimulants are objectionable for the same reason. Later on, if the pulse is soft and heart-action weak, digitalis in small doses in combination with the citrate, acetate or bitartrate of potash, or the benzoate of soda and the diluents already mentioned, may be used as diuretics.

Dropsy is to be treated by hydragogue cathartics, salines in concentrated solution or elaterium, and the diaphoretic measures above mentioned, and if need be by punctures or the use of Southey's tubes. A fine aspirator needle may be used and the liquid carried away by means of a rubber tube attached. Here, again, we should bear in mind the principles of asepsis. In dyspnea, on account of pleural effusion, paracentesis may be resorted to. In edema of the lungs a full dose, one sixtieth of a grain, of atropia should be given hypodermatically. In edema of the glottis, not relieved by hydragogue purgatives, diaphoretics, and inhalation of steam, scarification or possibly intubation or tracheotomy may have to be resorted to. I recently saw a case of edema of the glottis in a man eighty years old who was the subject of Bright's disease. He was soon relieved by saline cathartics, diaphoretics, and the inhalation of steam from a pitcher of hot water.

Vomiting may be treated by reducing the nourishment for a time to small quantities of limewater and milk, the use of crushed ice or hydrocyanic acid and bismuth.

If uremic coma should supervene, active purgation by means of elaterium or croton oil should be tried. One fourth of a grain of elaterium in solution should be given and repeated in an hour if necessary. If patient swallows with difficulty, it may sometimes be given by mixing it with a third of a teaspoonful of butter and placing it far back on the tongue. The dose of elaterium, which should be dissolved in alcohol or whisky, is one sixteenth of a grain. Should we fail to get the patient to swallow

the elaterium, two drops of croton oil may be dropped into the mouth undiluted. If the pulse is full and strong, blood-letting may be used, and this may be followed by the use of the normal salt solution. One or two pints slowly injected subcutaneously is said to be a great aid to elimination as well as to weak heart-action. This may be repeated, if necessary, every six to twelve hours. If it is not convenient to use the solution hypodermatically, larger amounts may be slowly injected into the rectum. These measures, hypodermoclysis and enteroclysis, may be used without the venesection in cases of weak heart-action. In some cases of contracted arteries when blood-letting from any cause is not used, nitro-glycerine may be given with benefit. It acts by dilating the peripheral blood-vessels and bleeding the patient, so to speak, into his own capillaries. The hot wet pack and the diaphoretic measures already mentioned are also appropriate remedies in coma.

In case of convulsions, chloroform by inhalation may be used to control them while waiting for the effect of other remedies. Bromides and chloral may be given if patient is able to swallow. If not, a dram of bromide of potash or soda and half a dram of chloral in three ounces of starch water may be injected into the bowel. The remedies just mentioned for uremic coma, hydragogue purgatives, venesection, diaphoretics, and the normal saline solution, may be used singly or conjointly, as the judgment of the attending physician will decide best in each case. Should several or all of these remedies be used without avail, or should it seem undesirable to wait on them, a full dose of morphine hypodermatically may be given. While there seems to be some difference of opinion in regard to the use of morphine in uremic convulsions, in my own experience I have seen from its use in these cases nothing but uniformly good results.

After the acute stage of Bright's disease has passed, when the patient is left weak and anemic, supporting measures are indicated, and especially the iron preparations. The tincture of the chloride, or, if a more diuretic preparation is desired, the Basham's mixture, may be given to adults, and syrup of iodide of iron or syrup of phosphate of iron to children. Digitalis, strychnia, or caffeine citrate may be used as heart tonics if they seem indicated. During convalescence an increase in the amount of food and the change to a meat diet should be gradually made. Meat should be withheld until albumen disappears from the urine. The patient should be warmly clad with flannels next the skin and avoid exposure to atmospheric changes, and take the greatest care to prevent a relapse.

In chronic parenchymatous nephritis, the treatment already outlined, judiciously followed, will meet most all the requirements. Warm clothing, care in diet and exercise, avoidance of exposure to cold, the use of simple diluents, saline laxatives, iron for anemia, digitalis, strophanthus, strychnia, and caffeine for weak heart, and nitro-glycerine for contracted arteries, properly used, with treatment of complications, constitute the chief indications. Tyson cautions against the too free use of iron, especially in the chronic interstitial form of the disease. Hare suggests one to three-drop doses of tincture of cantharides three times a day for the atonic condition of the kidneys that sometimes occurs in the later stages. Anders advises lactate of strontium for the same purpose.

I have been told by two of my medical friends that they have used a preparation of urotropin and salicylic acid in two or three cases each of chronic Bright's disease with apparent benefit. One of them says the preparation seemed to increase the amount of urine, diminish the albumen, reduce the dropsy, and relieve the headache. I did not learn whether this remedy seemed to act best in the parenchymatous or interstitial form of the disease.

In chronic interstitial Bright's disease the same care as regards hygienic and dietetic measures should be observed. The milk diet may be tried. Residence in a warm climate like that of Southern California or Florida is advisable. Patients often seem benefited by a visit to certain watering-places. The waters, however, are seldom curative, but simply act as the diluents already mentioned. The only remedies likely to have any curative value in this disease are the iodides and mercurials when there seems to be a syphilitic causation. The various symptoms should be treated as they arise. For the high arterial tension indicated by a hard pulse, throbbing headache, and flashes of light before the eyes, if persistent and not relieved by saline purgatives and sweating, nitro-glycerine, one drop of the one-per-cent solution every three hours, increased if necessary, often acts well. "Its value is seen not only in the reduction of the tension, but also in the striking manner in which it relieves the headache, dizziness, and dyspnea." (Osler.)

When there are signs of cardiac dilatation, shortness of breath, scanty urine, and local dropsy, digitalis in ten-minim doses three or four times a day, with saline laxatives in the morning, should be given. Strychnia may sometimes be given with benefit in these cases. I have sometimes combined the two tinctures of digitalis and nux vomica, mixed in equal proportion, with good effects in such cases.

The treatment of uremic coma and convulsions has already been given. The minor manifestation of uremia, such as restlessness, mental wandering, foul breath, coated tongue, headache, palpitation, feelings of numbness, and nocturnal cramps are to be treated in the same way—saline purgatives, hot baths, and nitro-glycerine to reduce tension. Osler says: "For the restlessness and delirium, morphine is indispensable. Since its recommendation in uremic states some years ago by Stephen McKenzie I have used this remedy extensively, and can speak of its great value in these cases. I have never seen ill effects or any tendency to coma to follow. It is of especial value in the dyspnea and Cheyne-Stokes breathing of advanced arterio-sclerosis."

BARDSTOWN, KY.

SARCOMA OF THE JAW.*

BY F. W. SAMUEL, A. M., M. D.

Professor of Surgery and Clinical Surgery in the Kentucky School of Medicine, etc.

About a month ago I was consulted by an old lady by the advice of my medical friends. She was fifty-three years of age. She consulted me on account of a tumor on the right side of her face. Examination of her mouth showed that the tumor was encroaching well into that cavity. I at once diagnosed sarcoma, which had perforated through into the nose and mouth, the fungous hematodes of the older authors. The case looked serious. The woman, however, was apparently in good health. The growth had occluded the nasal duct, and it was a question with me whether or not any thing could be done for her in a surgical way. Upon pressure just above the upper lip it was found that the bone was entirely destroyed, that it was soft; it could be pushed in as if the tissues were edematous.

I explained the situation to her husband, and told him it was possible to remove the growth, but whether successfully or not I was not sure; but if successfully removed, it might return. The patient was sent home without an operation.

She came back in a few days and said they had decided to have the tumor removed, and she was sent to the St. Joseph's Infirmary for the purpose. Now, on account of extension of the process through the nasal cavity, the odor was extremely nauseating, the nose was occluded,

* Reported to the Louisville Clinical Society.

and the mucous secretion was very offensive. The method I decided upon was to first curette out all this fungous mass. A probe could be passed through almost into the antrum. I concluded to first use the curette to get my bearings, and see what could be done. I put her under chloroform almost in the inverted position, in order that the blood might run out of her mouth, as I anticipated that the operation would be attended with considerable hemorrhage. I curetted the mass out thoroughly and found nothing more than an outside shell of bone; the tumor had almost encroached upon the eye. Then with Paquelin cautery I carefully burned over the raw surfaces. The tumor had encroached upon the mouth as far as the median line. The patient was so much improved by this simple operative procedure, that I said to her that I would later remove the entire growth, including the bone. Two weeks after that she went back to the infirmary, only having remained there four or five days after the curetting, and I removed the entire mass, making an incision after the method of Ferguson, somewhat modified, extending from just below the eye to the malar bone; then with a saw I cut through the malar bone, leaving only a part of the orbital plate; then with a pair of pliers pinched through the nasal bone, divided the mucous membrane, then sawed through the palate close to septum nasi, then incised the mucous membrane, taking every thing away.

The only reason I report the case is to get the opinions of the surgeons present whether it is justifiable in an extensive growth of this kind to operate, and what the probable result will be. The patient was operated upon two and a half weeks ago, and up to this time there has been no odor about the discharges, the cavity is perfectly clean, and there is nothing to be seen of the growth. There has been no paralysis following the incision. When the bone was removed I then cauterized all the edges of the wound, within the mouth and nose, the operation being extensive and tedious, and attended by considerable hemorrhage. I thought at one time that it would be necessary to ligate temporarily the common carotid after the method of Treves, but the hemorrhage was successfully controlled without resorting to this measure. Microscopical examination of the growth proves it to be a round-celled sarcoma.

Discussion. Dr. G. W. Griffiths: I have no comments to make in regard to the operation, but would suggest that the cavity be washed with permanganate of potassium.

Dr. William Cheatham: I think the operation was justifiable, but there will almost certainly be a recurrence of the growth *in loco* or elsewhere. We frequently remove eyes and cancerous growths of the orbit merely to get rid of the local trouble, with the hope that should the growth recur it will do so in some other part of the body, so the patient will not present such a disagreeable sight to his friends and relatives, and that death may be more rapid than with the local cancer.

Dr. W. H. Wathen: The operation was justifiable, not as a curative means, as that is impossible, but for the purpose of removing a very offensive condition not only to the patient but to all her surroundings. The operation will probably prolong life slightly and make what little time she lives more pleasant, but I have noticed in sarcomata of various portions of the body that unless we can absolutely remove every vestige of the disease and go beyond the diseased structure, in many instances it only facilitates matters in the wrong direction, and the patient dies sooner than she would otherwise. I remember a case of sarcoma of the leg operated upon at the Kentucky School of Medicine Hospital, where the disease had progressed but little for some time; an operation was performed for the purpose of removing the disease without amputation, the surgeon supposing that he had gotten beyond the growth. The wound never healed, the disease spread rapidly, and I think four operations were performed for its removal, the disease spreading more rapidly each time; then the leg was amputated by another surgeon, and the patient did well. I am not much in favor of operating as a curative means in sarcoma unless we can feel assured that we can get beyond the disease; but there are many cases where we are justified in operating when we know we can not cure the patient, and even when we know that we can not prolong life, where there is a disgusting, suppurating, cancerous mass, with an offensive odor, making the patient a burden to herself and those about her. We are also justified in operating for the temporary relief of painful conditions in patients who are obviously incurable.

Dr. A. Schachner: I agree that under the circumstances the operation was a proper one. As the previous speaker has said, if we are going to perform a radical operation for the cure of sarcoma, we must remove every vestige of the growth, even going beyond the confines of the tumor, if we are to expect a favorable result. This is easily understood when we remember the manner in which sarcoma extends. In a case like Dr. Samuel has reported it is sometimes justifiable to

operate, when we know that life will not thereby be prolonged, if we have reason to believe by the operation the remaining weeks or months of the patient's life will be made more endurable and comfortable. I think the operator has every reason to believe there will be a prompt recurrence of the growth in the case reported. He could hardly hope in this situation to be able to extirpate the entire mass, but even admitting this, he was justified in operating to rid the patient of a disagreeable mass of sarcomatous tissue. If the patient has a secondary deposit in some vital organ, her life so long as it may last has been made more endurable by the operation.

Dr. F. W. Samuel: The outlook for the patient is very gloomy, according to the statements of those who have spoken. I referred especially to osteo-sarcoma when I reported the case, not to sarcomata in general. If there is any one malignant disease that we have been taught is perfectly curable, it is osteo-sarcoma by amputating and removing the entire bone. I have never seen an osteo-sarcoma removed where any part of the bone was left in which it did not recur. If there is any growth that we do not know any thing about, it is sarcoma. We do not find the glands enlarged in sarcoma as extensively as we do in the carcinomata. There were no enlarged glands in the case reported. While this was an extensive growth, involving the mouth and nose, and while the case was practically inoperable according to the rules laid down by Jacobson, I undertook the operation in order to rid the patient of this large mass and reduce the deformity attributable to it. It would have soon broken through the skin, when she would have had this fungous, stinking mass outside the jaw. One point, perhaps, I did not make plain—that portion of the bone cut through near the eye was examined, and there was no infiltration, only that part which covered the antrum on the outside being involved. The growth was undoubtedly, in my opinion, and that of the microscopist who examined it, a so-called subperiosteal sarcoma of the round-celled variety. I believe sarcoma is perfectly curable when a radical operation is done sufficiently early.

LOUISVILLE.

IMMUNITY AND SERUM THERAPY.*

BY LYTTLETON B. COOK, M. D.

Immunity is the insusceptibility to an infection. This property may be inherited from parent, and as such is called natural immunity; or obtained during the progress of disease, and is then termed acquired immunity; or it may be produced by introducing into the system a micro-organism, a toxin, or a serum, and it is then called artificial immunity.

Immunity bears a very close relation to infections, and it is so often acquired during the development of diseases that I have prefaced this paper with a brief outline on the general etiology of infections. The vital causes will only be noticed, and when applied to infections they are living animal or vegetable parasites that produce in the body toxins. Bacteria are unicellular vegetable micro-organisms that multiply by transverse division or sporulation, and they are concerned in a great many more processes than disease. They are divided into saprophites and parasites. The first are nature's scavengers that thrive upon dead material, and are benefactors; while the parasites, the great enemies of organic life, multiply in the body and cause diseases.

They lurk in water and food that sustain life, and thrive in filth. Their course can now be traced in medical history through ages by their numberless dead. "The bubonic plague during the sixth century proved fatal to 25,000,000 people—a quarter of the entire population of Europe;" and other germ diseases have left their trail since history began. The diseases that bacteria produce are classified as infectious, contagious, and miasmatic. A disease that depends upon the vital action of an animal or vegetable micro-organism in the tissues is infectious, and it is disseminated in a roundabout way by means of water, food, etc., while a contagion is disseminated by mediate or immediate contact with the sick or healthy.

When an individual is protected from infections and contagions he is said to be immune, whether acquired by disease, inoculated virus, toxin, the serum of an immune animal, the milk of the mother, or inherited from parent *in utero*. Many diseases that have heretofore devastated cities and spread from country to country may now be restricted by immunization and quarantine. The living healthy body

* Read before the Kentucky Central Medical Society.

has within itself a means of combating more or less successfully infections. This property of destroying bacteria resides principally in the leucocytes, the lymph, the glandular system, and in the serum of the circulating blood; and this power by certain processes may be increased in the animal body in its fight against disease.

Several theories have been advanced as to the etiology of immunity. The oldest and most prominent are known as the retention and the exhaustion theories; in the former the disease leaves behind something that prevents a second development of the bacteria, and in the exhaustion theory there is consumed a substance that is necessary for their development.

Among the most widely accepted views is the phagocytic theory of Metschnikoff, who claims that the leucocytes of the blood "take up the bacteria, prevent their germination and the production of toxins, and finally cause their destruction." There are doubtless factors in the body that enter into the etiology of immunity; these have been called "anti-bodies," and are anti-bactericidal and antitoxic substances. The body fluids, especially the blood-serum, possess in a marked degree an anti-bactericidal action. This power is derived from the alexine, a substance whose chemic nature is unknown. The alexines appear to rise from the leucocytes, and represent their secretory product. The leucocytes and the blood-serum manifest their activities on the bacteria themselves, but there is also an antitoxin in the body during the development of disease for the purpose of neutralizing the toxins which are generated by the micro-organisms. The antitoxin is produced like the toxin during the development of disease, and when the antitoxin gains pre-eminence over the toxin, a favorable crisis terminates the disease, and immunity is established. So cure is effected in consequence of immunization naturally induced, and the crisis is the expression of cure through the sudden setting in of immunity. "The human body is ever on the alert to watch the invasion of bacteria, and upon their first appearance the leucocytes, aided by the other anti-bodies, attack these germs, and if they with the alexin can not manage them, they are carried away to the lymphatic gland and spleen for further destruction.

"In some malignant infections the leucocytes, realizing their inability in combating such an army of bacteria and toxin, make no defense, are not reinforced by other leucocytes, but capitulate upon the easiest terms, preferring death in peace rather than in war.

"Preventive medicine was brought about by the long observation that a single non-fatal attack of certain diseases would render said person immune from future attacks. Dr. Jenner was the first to imitate nature in offering immunity against a contagious disease by vaccinating with cowpox, and yet this discovery remained silent for almost a century." In 1880 Pasteur demonstrated that by using attenuated virus of cholera, chickens could be protected from cholera, and about the same time he began the study of symptomatic anthrax, and his efforts were crowned with success. He found that anthrax was due to a rod-shaped bacillus found in the blood and all the tissues of an anthrax body, and that by lessening the virulence of these vegetable parasites and inoculating them into susceptible animals, he could protect them from this disease.

So symptomatic anthrax vaccination is a success beyond question. Any means that will retard or dwarf bacterial growth, such as heat, sunlight, will so lessen their virulence as to render them applicable for vaccination. These researches were more or less successfully applied to pleuro-pneumonia, diphtheria, and Asiatic cholera.

Immunity may be brought about by receiving directly into the system a living virus, and within a very short period it will bring about a febrile reaction, the result of the activities of the products of the micro-organisms, and upon which immunity as well as infection depends. This knowledge led to the injection of a filtered product of bacteria into susceptible animals, and they were made immune like those in which the living virus was used, and not only were they made immune, but the serum of the animal was so altered that the serum was capable of immunizing an animal.

Immunity may, therefore, be obtained in three ways, viz: First, by direct inoculation of a living virus; second, by introducing into the body a toxin, the germ product of bacteria, and third, by the serum of an immune animal. Of these ways of inducing immunity, the living virus and toxin imitate nature, and each requires time, while in serum immunity the animal is protected. Immunity bears a specific relation to bacteria, toxin, and serum; that is, each virus protects only against its own germ, and there can not be a general immunity.

Protection against cholera may be conferred upon animals by inoculating them with the sterile product of the cholera spirillum, and the system undergoes such a change that should the active cholera germ be brought in contact with the serum of an immune cholera

animal, the cholera spirillæ themselves will be disintegrated, while no such action will occur with other bacteria. There is, therefore, a specific action in the serum of an immune animal against the bacteria that produce the infection. This power of destroying the bacteria is lost outside the body, still there remains a power to paralyze their motion that does not appear in the serum of a non-infected animal. An example of daily observation and of important diagnostic value is seen in the paralyzing and clumping of the typhoid bacillus by the action of the serum of a typhoid patient known as Widal test. The question of natural immunity—the transmissibility of immunity from parent to offspring—for the present is unsolved. Yet we believe that immunity may be due to a natural trait, that is, to tissue immunity which is inherent in the cells and not due to an antitoxin acquired through inoculating with modified virus or toxin. And if true in an individual, why not true in a race? It is a well-established fact that different races are not alike susceptible to infections. There is a general consensus of opinion that the negro is less susceptible to malaria and yellow fever than the white race, and the white man less susceptible to cholera. The Jew escapes more frequently tuberculosis than any other race, and the mortality from cholera among them is so small that the very fact of its occurrence has been denied, and "from epidemics they have often escaped as if they possessed a charmed life." The average duration of the Jew's life is forty-eight years, and that of the Christian thirty-six years. What makes the difference? Is it the result of natural or acquired immunity? "Perhaps more than either of these causes, the Jews have inherited respect for the laws of God vouchsafed to the children of Israel, and have not departed from them through all their years of wandering."

After all this training it is hardly probable that the Jew or any race is immune from any disease. It is along the line of immunity and infection that the profession hope to elaborate a wider field of serum therapy by inoculation for preventive medicine. Already animals have been rendered more or less insusceptible to tetanus, cholera, diphtheria, chicken cholera, hog cholera, typhoid fever, anthrax, and rabies.

Not only can immunity be conferred against certain diseases, but the serum of an immune animal can be used in the successful treatment of a disease after it is in progress. The mortality of diphtheria has been greatly reduced since the introduction of antitoxin. Erysipelas can be

successfully treated by antistreptococcus serum; and puerpural infection, when due to the streptococcus, is favorably influenced by the serum treatment.

We are on the borderland of success in the serum treatment of several diseases, and ere long we hope by preventive inoculation and serum therapy that many diseases will be prevented and others successfully and scientifically treated. References in this paper are largely taken from Levy and Klemperer, *Clinical Bacteriology*, and A. C. Abbott, *Hygiene of Transmissible Disease*.

STANFORD, KY.

A GUNSHOT WOUND OF THE RIGHT LUNG WITH COMPLICATIONS.*

BY A. M. MORRISON, M. D.

I was called October 27, 1897, to see Jimmie Taylor, colored, twelve years of age, who a few hours previous, while out hunting with a shotgun loaded with full charge of powder and No. 5 shot, after climbing a fence, with his hand on the muzzle, attempted to pull the gun through the fence after him, when the hammer caught on a board and one barrel was discharged, the contents entering his right chest, fracturing the sixth rib near its cartilaginous attachment, and inflicting an ugly wound with extensive comminution of the rib. The entire charge of shot then entered the cavity, wounding the base of his right lung. None of the shot passed entirely through the opposite chest wall, but seven or eight shot were found under the skin near to and beneath the right axilla, and were removed.

I found the patient with cough and labored breathing with expectoration of a bloody mucus, and with every expiration a free discharge from the wound of a bloody, frothy mucus, with every indication of extensive lung lesion. The patient was living with his grandmother, "Aunt Liz," in a small cottage with seven or eight other members of the family, and the house and surroundings decidedly unsanitary. I had him placed on a cot in the middle of the room, and observed all the rules of hygiene and cleanliness possible under the existing circumstances. I then proceeded to dress the wound, first removing several spiculæ of the fractured rib, and then packed the wound with a ten-per-cent iodoform gauze, with compress of gauze and absorbent cotton, and then applied a moderately tight bandage. I directed an

* Abstract of a paper read before the Kentucky State Medical Society, Louisville, May, 1901.

opiate to be given him at bedtime if restless, or if his cough proved troublesome. On visiting patient, October 28th, I found he had a fairly comfortable night; there had been quite a free discharge of bloody mucus. I packed the wound with gauze and dressed as on first visit. Pulse 90, temperature 100° F., cough less frequent, and had some appetite. I continued my visits daily, and dressed wound in same manner until November 2d, when I found a large accumulation of straw-colored serum filling the pleural sac, and on removing the dressing he would cough and eject this fluid from the wound with great force. By changing his position on the cot and using a flexible rubber catheter I could syphon off most of this fluid. At this time he had an expectoration of rusty sputum, and on examination I found one half of his right lung hepatized, showing a traumatic pneumonia; his pulse was now 110, temperature 102 $\frac{3}{8}$ ° F., respiration 44 to the minute, tongue heavily coated, and bowels inclined to constipation. Gave him carb. ammonia and tinct. digitalis until the pneumonic trouble was much improved, also gave him Rochelle salts to overcome the constipation of his bowels.

On the 9th of November I found empyema had set in; he now had a free discharge of pus from the wound, which was at times bloody in character. I then gave him two and a half grains of quinine every four hours, and fifteen drops tinct. ferrichlor. three to four times a day, and continued a liberal diet. On the 13th of November found his breathing labored and 52 to the minute, pulse 130, temperature 104 $\frac{1}{2}$ ° F.; his general symptoms indicating a septic condition.

On November 14th I removed two inches of the rib, punctured the pleura, and inserted a rubber drainage-tube secured with a large safety-pin. This was followed by a discharge of ten or twelve ounces of pus. I then washed out the cavity thoroughly with a solution of permanganate potash, and continued dressings of iodoform gauze. The patient stood the operation well and with but little pain or shock. In a few days I noticed quite a favorable change in his condition; his respiration was less labored and only 38 to the minute, pulse 110, and temperature 101 $\frac{2}{8}$ ° F. Continued quinine and tinct. ferrichlor., and added milk punch. From November 14th to December 4th I irrigated almost daily with the permanganate solution, using from one to one and a half gallons. On November 18th I omitted the quinine and put him on Scott's Emulsion of Cod Liver Oil, as he had for several years previous to his accident shown marked symptoms of pulmonary tuber-

culosis; his mother, sister, aunts, and other near relatives having died of consumption.

On visiting the patient on December 4th I was surprised and no little disturbed in mind at not finding the strip of gauze still used in packing the shot wound. The wound had now granulated and nearly healed, leaving a tortuous opening about one sixth of an inch in diameter. The last strip of gauze used was only seven inches in length by two inches in width. For several days I had been rather careless in dressing the wound, and had on several occasions failed to secure the gauze to the bandage. The drainage-tube had been removed several days before, and both wounds were nearly closed. I made a careful examination with probe and forceps, but was unsuccessful in finding the lost gauze. I now concluded to "trust to luck," with a hope that it would in the end "show up," but I must confess to having been greatly worried and to have passed many sleepless nights in consideration of what would be the probable outcome resulting from my culpable carelessness. I was satisfied in my mind that the gauze had been drawn into the thoracic cavity.

The patient steadily improved, and on the 10th of January, 1898, was able to leave his room and walk out in the yard. By April 1st he had regained his flesh and strength, and was able to do some light work, though he still had a dry cough, with at times prolonged paroxysms attended with slight expectoration of mucus, and often with a feeling of choking or suffocation. During the month of October he served me as office and stable boy, and most of this time his cough was troublesome; frequently had severe and prolonged paroxysms, in which he would almost suffocate, and would be left in a weak or exhausted condition. My suspicions were now roused, and I feared the strip of gauze was a factor in the case; was probably giving rise to the severe and suffocative attacks of coughing. I sent him home about the 1st of November.

He attended school near the home of his grandmother in November and part of December, 1898, and while in the school-room on December 10, 1898, he had a severe attack of coughing, and on permission of his teacher he went out in the yard, where he continued to cough for several minutes, until, as he said, "he thought his eyeballs would pop out of their sockets." Finally he coughed up something into his throat, which he caught hold of with his thumb and forefinger, and which he pulled out of his mouth and threw on the ground with fright

and disgust. Finally he mustered sufficient courage to pick up the monster and run home with it to his grandmother, who carefully wrapped it in a piece of paper and locked it up in her "chist," and a few days later when passing her house she called me in and gave me the *long lost strip of gauze*. I think I can positively declare its identity, and that it was concealed in the lung or thoracic cavity of Jimmie Taylor from December 4, 1897, to December 10, 1898—over twelve months. When expelled, the gauze was round in shape with both ends pointed, and covered with a thick, inspissated mucus, and resembled very much in appearance a large lumbricoid worm. I can not say positively by what route it traveled, but it certainly reached the larger bronchi and was expelled in the manner described.

I have made careful search of the text-books and literature, but have been unable to find recorded a similar case.

I am impressed with one fact, that whereas for several years before this accident the patient was decidedly, and I think beyond doubt, tuberculous, as evidenced by cough, great emaciation, night-sweats, with apparent disintegration of the apex of his right lung, his condition is now much changed and improved, he is free from cough, and to all appearance is a stout and healthy boy.

In conclusion I will ask, is it probable that the ten-per-cent iodoform gauze remaining so long in the right lung could have exerted a germicidal and healing influence over the diseased apex of that lung?

GOSHEN, KY.

STRANGULATED UMBILICAL HERNIA.*

BY WILLIAM C. DUGAN, M. D.

Professor of the Principles and Practice of Surgery and Surgical Pathology in the Louisville Medical College, etc.

I have a specimen removed yesterday afternoon from an irreducible hernia of twenty-six years' standing, the patient being a woman weighing two hundred and thirty pounds, but very low in stature. It was an umbilical hernia, the protrusion coming out through the umbilicus proper. The sac contained practically all of the omentum, the transverse colon, and a large amount of the small intestine. I present the specimen more because of its large size and complications than any thing else. The hernia had been strangulated for forty-eight

* Reported to the Louisville Clinical Society.

hours before the operation. Those in attendance had made an effort to reduce it by manipulation, but failed. The usual symptoms of strangulated hernia were present. Operation was decided upon, and I was called to their assistance. We transferred her to the infirmary, when she was gotten ready for the operation, and chloroform was selected as the anesthetic. After making an incision we had a prolonged search before the strangulated portion was found. The patient was on the table one and a half hours, owing to the many complications which made it exceedingly difficult. There were numerous divisions or compartments to the hernia which were divided off by fibrous bands very tough in character. The adhesions were carefully but rapidly separated, and the omentum tied off and removed, and I here present it. The wound was then closed with silkworm gut. The patient had vomited persistently before the operation, and altogether the case was a very grave one.

This is the kind of a case the surgeon has learned to look on with disfavor. In the first place, such fat subjects stand no operation well where general anesthesia is to be used. In the second place, a large, irreducible, strangulated umbilical hernia is always serious. Under no other circumstances than that of strangulation would I consider an operation in such a subject; but we can not select emergency cases.

Discussion. Dr. Louis Frank: I have operated upon two cases of umbilical hernia, one of them necessitating resection of the intestine, and I know of no surgical emergency which can be compared to a strangulated umbilical hernia. In one of my cases strangulation had existed for five days. There was great difficulty in both operations, but particularly in one; it was almost impossible to return the intestines to the abdominal cavity, notwithstanding the fact that quite a large amount of the intestine was resected. I have noticed this point has been commented upon recently by various operators, that in operating upon large umbilical hernia the cavity seems to have accommodated itself to the lessened contents, rendering it exceedingly difficult to reduce the intestines sufficiently to properly introduce the sutures. In one of my cases it was with the greatest difficulty that reduction and suture could be accomplished.

In these umbilical herniæ, which are usually very large, where strangulation has taken place, the operation is so difficult and tedious that it is risky to attempt to do what might be termed a radical-cure operation, that is, splitting up the fascia and bringing it and the

muscles together as we do in other cases where such grave conditions do not exist. A great deal of care must be exercised in cutting into the sac, for with the distension which usually exists there is great danger of cutting into the intestine itself. We may find a portion of the stomach or duodenum incorporated in these umbilical herniæ. In one of my cases the pyloric end of the stomach, also part of the duodenum and part of the colon were in the hernial sac.

Dr. W. C. Dugan: I wish to emphasize the point made by Dr. Frank about the difficulty of reducing these hernia, even after opening. This was true in the case I have reported. If I had attempted to reduce the large piece of omentum I would have found it impossible. When the omentum was tied off and removed we had considerable trouble in replacing the intestines. It is best in all these cases, especially in fat people, to remove as much of the omentum as may be in the sac, for if you should force it back into the cavity it would act mechanically and cause trouble, and later, should the patient live, predispose to a return of the hernia.

I saw the patient to-night, and she is in fairly good condition; her bowels moved last night, and she is doing as well as could be expected. What the result is going to be, of course can only be conjectured.

LOUISVILLE.

SYPHILITIC ULCERATION.*

BY I. N. BLOOM, A. B., M. D.

A married woman, twenty-one years of age, who had separated from her husband, consulted me. Her mother has for thirty years suffered from lupus, which has disfigured her for life—irreparably so. A year ago this lady came to me with a fungating ulcer over the left side of the upper lid, extending nearly to the median line to the extent of a silver quarter. It was oval in shape, and had extended slightly but rapidly. She also had on the wrist and on the arm small ulcers, which had, however, healed, leaving scars which were not characteristic. Others had seen the patient before me, and each had thought the disease similar to that from which her mother suffered, viz., lupus. The rapidity of the growth and the age at which it had attacked her (twenty years) made lupus seem to me improbable. The diagnosis was then between syphilis and carcinoma; these were the only two condi-

*Reported to the Louisville Clinical Society.

tions to be considered. Carcinoma was excluded from the absence of glandular enlargement and from the previous ulcers, and the diagnosis was made of syphilis.

The ulcer was curetted thoroughly and caustic potash applied; at the same time specific remedies were given internally, and the ulcer yielded nicely. As soon as healing process of the ulcer was complete, she ceased taking the specific treatment against my advice.

About three months ago she came in and stated that three or four days before she had noticed a painless ulcer at the junction of the hard with the soft palate in the median line, and since then regurgitation of liquids had taken place. Upon examination I found a distinct syphilitic ulceration of the soft palate. Under specific remedies it healed in four weeks, and there has been no further regurgitation. There is now a well-marked cicatrix where the ulceration existed.

Some of the gentlemen present are familiar with the case. I believe afterward a clear specific history developed, but certainly all the evidence pointed to lupus, especially as the mother was terribly afflicted with this disease, at least half her nose having been destroyed by lupus.

Discussion. Dr. W. F. Boggess: I saw the case referred to by Dr. Bloom. With the history before me I was inclined to consider it a case of lupus. I have never seen syphilitic ulceration which had the appearance presented. It was unlike any case of syphilis that I have ever seen.

LOUISVILLE.

THE AGE OF FIRST MENSTRUATION IN THE UNITED STATES.*

BY GEORGE J. ENGLEMAN, M. D.

The period of pubertal development is an important epoch in girl-life as the crest of one of the three great waves of functional activity during which susceptibility to morbid influences is at its highest. Much of woman's functional irregularity and suffering is due to neglect at this time, hence the pubertal period claims the attention of the physician as a promising field for preventive gynecology.

To the physiologist and ethnologist the age of first menstruation in the United States, but little studied as yet, is of interest, as the extent of territory, with its variety of climate and the many races represented, offers exceptional advantages for the solution of still open problems as

* Read before the American Gynecological Association, Chicago, May 31, 1901.

to the causes which influence pubertal development, which hasten or retard the appearance of the menstrual flow.

Ten thousand observations as to the time of first menstruation of American-born women, many with reference to points never before investigated here or elsewhere, give me ample material for an authoritative solution of the questions involved. These observations, from my own practice and that of helpful friends, are many, and the identity of results obtained in far distant points, from Montreal and New Orleans, from St. Louis and Boston, vouches for their correctness; furthermore, they are corroborated by all previous records, a total of 5,000 in such points as these may cover.

The mean age of first menstruation in this country is 13.9 or 14 years, the same in the United States and in Canada. Climatic differences in nowise influence pubertal development within the bounds of the North American continent. The American-born, be they of American (14.1), German (14.6), Irish (14.5), or French (13.6) parentage of the same class, attain puberty at the same age in Montreal, St. Louis, or Boston; the negro does not vary (14.5) whether in New Orleans or St. Louis. The greatest variation caused by the extremes of all influences is one year, from 13.5 in the girl of highest refinement and education to 14.5, which is the period for the American-born of the laboring classes of German and Irish parentage. In other countries the difference between the extremes of social classes is from two to three years.

Refinement, education, city life, nerve stimulation determine precocious puberty; ignorance, poverty, and manual labor retard; social status in itself means very little; heredity and race have a slight determining influence.

The American-born are more precocious than the women of other countries in the same zone; 14 is the age of puberty in the United States and Canada, 15.5 in the temperate zone of Europe. The native American is more precocious than the American-born of foreign parents, but the latter closely approximates the American of American parentages, even in the first generation.

Racial characteristics fade rapidly away; the age of puberty in Germany is 15.5 to 16, in Ireland 15.3, and for the girl born in America of German or Irish parentage 14.5—in St. Louis as it is in Montreal. The Canadian French are the only exceptions, between 14 and 15 in their native land. These alone of all races are more precocious than

the American of the same class when born in this country; 13.7 is the mean age; climate here has absolutely no influence; race very little; mentality, surroundings, education, and nerve stimulation stand out prominently in this country as the factors which determine precocity.

BOSTON, MASS.

Reviews and Bibliography.

The Estivo-Autumnal (Remittent) Malarial Fevers. By CHARLES F. CRAIG, M. D. (Yale), Acting Assistant-Surgeon, U. S. A. Illustrated by two colored plates and twenty-one clinical charts. Cloth. 221 pp. Price, \$2.50: New York: William Wood & Co. 1901.

This volume has been produced after a long experience with and study of these diseases, and reflects great credit upon the author and publisher. It is largely the result of personal experience gained in the United States military hospitals, and as such embodies the conclusions arrived at from nearly three years of investigations and the careful study of hundreds of cases.

We heartily recommend this book to all interested in this important subject.

Progressive Medicine. Volume II, June, 1901. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 460 pages, with 81 engravings and one full-page plate. Philadelphia and New York: Lea Brothers & Co. Issued quarterly. Price, \$10 per year.

This volume is fully up to or surpasses former numbers of the Progressive Medicine series. We know of no books in the English language so valuable for up-to-date references as this system.

Dr. Coley describes the most recent technique of hernia; Dr. Clark discusses the parasitic origin of cancer; Dr. Stengel on the blood and many other well-known authors add much to the volume. We congratulate both authors and publishers.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By RICHARD C. CABOT, M. D. With colored plates and engravings. Fourth revised edition. New York: William Wood & Co. 1901.

We heartily endorse the volume as one of the best ever published upon this most important subject. This edition is an improvement on the former in that the author has added thousands of observations by the internes of the Massachusetts General Hospital to those of his own. The text has been almost entirely rewritten. Sections on pernicious anemia, leukemia, diseases due to animal parasites, etc., have undergone extensive changes to bring them up to date in every particular. The book reflects credit on both author and publisher.

THE AMERICAN PRACTITIONER AND NEWS

"NEC TENUI PENNÂ."

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H. A. COTTELL, M. D., M. F. COOMES, A. M., M. D., Editors.

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THE DEATH OF PRESIDENT McKINLEY.

The lesson taught by the death of our beloved President will be remembered for all time by the American people. While there is no land under the sun where freedom and liberty are so equally shared by all classes as in America, yet it is evident that this freedom certainly had something to do with and led to the destruction of this great man. No man or woman should be permitted in this country to promulgate any doctrine which is opposed to the best interests of its citizens. The man who preaches anarchy should be banished. Anarchists should not only not be permitted to promulgate their doctrines, but they should not be allowed to live in this country and enjoy its freedom and its privileges, when their whole lives are devoted to the destruction of its very best principles and its leaders.

All Praise to the Doctors who had Charge of the President's Case. We have the pleasure of a personal acquaintance with some of the physicians interested in the case, and there can be no question that every thing known to the art and science of surgery was applied in this case. It has now become a settled fact, and should have been long ago, that in all cases of gunshot wounds of the abdomen, where the cavity

has been entered, laparotomy should be done at the very earliest possible moment. It was done in the President's case and in the most skillful manner and by trained, experienced men—the best that the nation could afford, or the world, either, for that matter. While the final result was far from what was expected in the earlier days after the operation, it was no fault of the operators or any one concerned in the operation.

The Autopsy. The autopsy showed a very remarkable condition of affairs to exist in the track of the wound. The stitches were intact. There had been no leak from the stomach, but there was a large necrotic area surrounding each wound in the stomach. A similar condition of affairs existed along the whole line of the track of the bullet. This condition is so unusual that something more than passing notice of it is demanded. The wound in the kidney and the wound of the pancreas of themselves were not necessarily fatal, but of course contributed their share to shock.

The Bacillus Aerogenes. It may have been the work of the bacillus aerogenes, which was described by Welsh and Nuttall in 1891-2. "Later studies of Welsh and Flexner and many others have confirmed the original belief that the bacillus is a frequent excitant in man of a serious infectious disease, characterized by a local or widespread serous and emphysematous, phlegmonous inflammation, frequently associated with gangrene and general symptoms of a profound toxemia.

"The bacillus aerogenes is rather large, on certain media spore-forming, is often capsulated, and occasionally forms chains. It retains the stain by Gram's method. It is anaerobic, growing readily in a variety of artificial culture media.

"Rabbits are not susceptible to even large intravenous injections of pure cultures. But if they be killed soon after such inoculation, within a few hours, at room temperatures, an abundant development of gas occurs throughout the body. On the other hand, the subcutaneous injection of a very small quantity of the fresh edematous exudate is followed by the typical local and general marks of infection. Guinea-pigs are more susceptible than rabbits to inoculation, either with cultures or fresh material, and develop characteristic lesions.

"While infection may occur without gas, in most cases before death, and especially after, there is an abundant formation of gas in the tissues. This is largely hydrogen, formed through the splitting by the bacillus of either sugar or proteids. While the gas may be present in

any of the tissues, in the body cavities, and in the blood-vessels, it is especially in the liver after death that the marks of gas accumulation are most striking. This organ may be riddled with small holes, presenting an appearance which has been characterized as 'foamy liver.'

"Infection may occur through wounds or injuries in any part of the body. It has been frequently observed in pregnant and puerperal women. Ulcers of the stomach and intestine or the urinary tract may be portals of entry. One of the more common forms of local infection is the so-called gaseous phlegmon or emphysematous gangrene. Pulmonary and pleural lesions, appendicitis, and peritonitis are described as well as gaseous abscesses and purulent meningitis, while the usual action upon the tissues is the induction of bloody edema and necrosis. This bacillus is also occasionally pyogenic.

"The natural habitat of the organism is the soil and the intestinal canal. This accounts for the relative frequency of infection through the intestinal and genito-urinary tracts and through wounds contaminated with dirt.

"Infection, especially from the intestinal canal, may apparently occur during the later hours of life, with or without symptoms, and with a post-mortem formation of gas. It is often difficult to determine, since gas formation occurs so early and so extensively after death, whether the entrance has or has not been effected during life. It seems fair to infer, as the result of animal experiments, that when the gas formation, even after death, is widespread, ante-mortem infection had occurred. Concurrent infection with other organisms, especially the pyogenic cocci, is frequent.

"Welsh and Nuttall early called attention to the importance of recognizing the possibility of infection with this bacillus in judging of a certain class of cases of alleged air embolism."

Small Kidney. A significant fact connected with the post-mortem was that the kidney was rather small. We take it for granted that the kidney was contracted, and if this was true, it meant that the President had interstitial nephritis. This, if it existed, can fully account for the condition of the wound, as it is a well-known fact that tissue reparation does not occur, and particularly would it be the case in this instance, as the President's vitality was at a low ebb, notwithstanding he was apparently in good health.

THE following act passed by the Tennessee Legislature is certainly a step in the right direction, as there can be no doubt but what substitution by druggists is carried on now in the most disgraceful wholesale way. The remedy lies now in the prosecution and conviction of the members of the drug profession who persist in this abominable work. There was an attempt made in this city to prosecute a druggist who had offered \$500 if he was caught substituting. It was not long before he was caught red-handed, and upon the witness-stand put up the pitiful whine that it was trade talk, in order to avoid the payment of the reward he had offered; and the result was that he went unpunished, when as a matter of fact his admission of having substituted was quite sufficient to have convicted him and made him subject to punishment as laid down by the law. There should be a thorough organization of the doctors against substituting and counter-prescribing, and it will finally become necessary to effect this organization because of the great extent to which this practice is now carried on. We have an excellent law in this State against substitution, but unfortunately, like many other good laws, its provisions are not carried out. The Tennessee law reads:

An Act to prevent the substitution of any drug in filling physicians' prescriptions by druggists in the State.

SECTION 1. Be it enacted by the General Assembly of the State of Tennessee, That it shall be unlawful for any corporation, firm, or person, or any combination or association of corporations, firms, or persons engaged in the business of buying, compounding, and selling drugs and medicines to substitute any drug or medicine in lieu or instead of that given to the patient by the physician on the face of his prescription.

SEC. 2. Be it further enacted, That it shall be unlawful for any agent or employe of such person, firm, or corporation or association or combination of persons, firms, or corporations engaged in the business of buying and selling drugs in this State to substitute any medicine for the specific medicine mentioned in the physician's prescription.

SEC. 3. Be it further enacted, That any person, firm, or corporation violating the provisions of this act, or aiding or abetting the violations of the same, shall be guilty of a misdemeanor, and upon conviction shall be fined not less than \$25 nor more than \$100 for each and every offense.

SEC. 4. Be it further enacted, That this act take effect from and after its passage, the public welfare requiring it.

Approved April 3, 1901.

BENTON McMILLIN, *Governor.*

E. B. WILSON, *Speaker House of Representatives.*

NEWTON H. WHITE, *Speaker of the Senate.*

A true copy: JOHN W. MORTON, *Secretary of State.*

THE Tri-State Medical Society of Alabama, Georgia, and Tennessee will meet at "The Tulane," at Nashville, Tenn., on Tuesday, Wednesday, and Thursday, October 8, 9, and 10, 1901. An interesting programme has been arranged, and no doubt the meeting will be successful in every particular. All physicians are invited.

AT the joint meeting of the Northwestern Wisconsin and Fox River Valley Medical Societies in Wanapocca, August 13th, Dr. Byron Robinson, of Chicago, was honored with a special vote of thanks for his valuable medical discoveries and his original contributions to the science of medicine.

Current Surgical and Medical Selections.

A NEW METHOD OF PERFORMING PERINEAL PROSTATECTOMY.—In a paper read before the Medical Society of London, P. J. Freyer describes an operation for the removal of the prostate by the perineal route. The steps of the operation are as follows:

A median perineal cystotomy is done, and the finger introduced into the bladder to examine the prostate from its vesical aspect. An incision is next made, commencing at the posterior angle of the cystotomy incision, carried straight back along the median perineal raphe, round the anus, to terminate in front of the coccyx. The left forefinger is then introduced into the bladder and presses the prostate into the perineal wound. The capsule is incised and the prostate either shelled out from its capsule or removed piecemeal by cutting forceps and scissors, the method of enucleation depending upon the fibrous or adenomatous condition of the gland. A full-sized drainage-tube is then passed through the cystotomy wound and secured in position. The extensive opening into the ischio-rectal fossa is then packed with gauze. The operation is a combination of that of Dittell with a perineal cystotomy for the purpose of pushing the prostate into the wound. Nicoll opens the bladder supra-pubically to attain the same object.

The author claims for his operation that: 1. The condition of the bladder and prostate can be readily ascertained by the preliminary cystotomy. 2. The prostate can be easily hooked into the perineal wound. 3. The latter manipulation gives easy access to the gland. 4. The drainage-tube through the cystotomy wound prevents any suppuration of the perineal wound.

It is obvious, as the author is careful to point out, that this method is only applicable to those cases where the enlargement is chiefly in the lateral lobes, and moreover in a perineal rather than in a vesical direction.

In a case the history of which Mr. Freyer relates, the operation was a complete success, but it too often happens that cases of prostatic hypertrophy seek the surgeon's aid only when the effects of back-pressure have destroyed in a large measure the expulsive forces of the vesical muscle. In such cases careful catheterization is the only course to pursue.—*Pacific Medical Journal*.

EMPHYEMA FOLLOWING LOBAR PNEUMONIA.—According to the New York Medical Journal for November 24th, W. Hale White reports 45 cases of empyema following lobar pneumonia.

He says that in 1,331 cases of pneumonia occurring in Guy's Hospital from 1883 to 1898, empyema developed in 45 cases, or 3.3 per cent. Pneumonia has increased of late years and has become a more severe disease. This is possibly due to the increased prevalence of influenza. The temperature is the most important aid in the diagnosis of empyema following pneumonia. There is a fall of temperature at the pneumonic crisis with a subsequent rise in about one third of all cases. In many cases there is no apyrexial interval, and pus may be present from quite early in the illness. In other cases pericarditis and malignant endocarditis may prevent the fall of the temperature to normal after the crisis of the pneumonia. The duration of the apyrexial interval is usually from one to five days. Five of the 45 cases had pericarditis, but only one pyopericardium. Malignant endocarditis was present in 3 cases. The presence of local tenderness is of great importance. A tender spot often exists over deep-seated small abscesses, and should be chosen for insertion of the exploring needle. Pus gives the well-known signs of fluid, but the detection of small empyemata is often most difficult. Edema of the chest wall is said never to occur in pneumococcal empyemata; the pus from them is often light green and very thick. In no case did a single aspiration stop the pyrexia and formation of pus, even in the cases where the pneumococcus was the sole organism found. Of the 45 cases, 13 died, a mortality of 29 per cent. The extra danger to life in pneumonia complicated by empyema is not very great. The amount of pus varies greatly; 170 ounces were present in one case. It may collect with the greatest rapidity.—*The Charlotte Med. Journal*.

RÖNTGEN RAYS IN THE TREATMENT OF SKIN DISEASES, AND FOR THE REMOVAL OF HAIR.—William Allen Pusey (Jour. of Cut. and Gen. Urin. Dis., July, 1900) states that the effects of the rays upon the skin and subcutaneous tissues are all inflammatory in character, ranging from slight erythema to violent inflammation, ending in necrosis. The two actions of the Röntgen rays on tissues which offer the most promising prospects of utilization for therapeutic purposes are: (1) Its power of causing the falling out of the hair, and (2) its power of causing inflammatory reaction and influencing the nutrition of connective tissue. The practical problem is the application of the rays in such a manner that undesirable results be

avoided. One should not use a current of more than one and a half amperes and twelve volts' strength, this current, of course, being much weaker than that employed for skiagraphy. An inductor of more than 30 cm. spark-length should not be used, nor should exposures be too long or too frequent. At the beginning the sittings should not be longer than five minutes, and the distance of the tube not more than 15 cm. Freund (who has done considerable experimenting upon the skin) recommends for the attainment of the best results the use of a mechanical interrupter run at the rate of 800 to 1,000 interruptions per minute. Suitable lead masks, for protecting surfaces which are contiguous to the areas to be treated, should be used. The evidences that the exposures have been carried far enough are: The appearance of erythema or pigmentation; the blanching of the hair, and the loosening of the hair. The application of the Röntgen rays has been chiefly in four classes of affections: In hypertrichosis, for the removal of hair; in diseases of the hair and of the hair follicles; in inflammatory diseases, like chronic eczema, and in certain specific diseases, like lupus. The author believes that the agent is a valuable one for the removal of hair, especially in cases where the growth is diffuse and profuse. In lupus the rays seem to have a selective action, and, employed properly, constitute a remedy of value.—*The Am. Jour. of the Med. Sciences.*

SURGICAL HINTS.—In pelvic operations it is very necessary, if we are dealing with pus cases, which never stand anesthesia and shock at all well, to seek first for the most rapid mode of incision and drainage. In the majority of cases the vaginal route will be the best for this purpose, even if a secondary operation may be required later.

In young children priapism is commonly due to vesical or preputial irritation. If the first, it usually denotes the presence of a calculus. If of preputial origin it calls for retraction of the prepuce and thorough cleansing of the coronal sulcus, which may be filled with irritating secretions, or else, and most ordinarily, for circumcision.

When administering chloroform the signs of impending danger are sudden dilatation of the pupil, shallow, sighing respiration, absence, rapidity or irregularity of the pulse, and sudden paleness or lividity. Any one of these suffices, without the others, to show that danger is present, and that measures must immediately be taken to avert it.

Fistula in ano, in young children, may always be regarded of a tuberculous nature, and these patients must not be subjected to a cutting operation without first determining the fact that one has not to do with a spinal abscess that has found an outlet in the ischio-rectal fossa. In these cases a soft probe penetrates very deeply, the child has a stiff or curved back, or shows symptoms of disease of the sacro-iliac synchondrosis.

Retention of urine in young boys may be due to the presence of a calculus within the urethra. Wherever it is located, cut down upon it by an incision in the middle line. Even if impacted between the neck of the

bladder and the root of the scrotum, no attempt is to be made to push it backward, for even should this measure be temporarily successful, the stone would have to be removed later on, and the direct incision is less dangerous than a lithotomy.

Every now and then, in pelvic work, we have a patient who appears to suffer from an inordinate amount of pain. Under these circumstances we can not usually do without a fairly large amount of morphine in repeated doses. In these cases moving the bowels early is absolutely necessary. Intestinal atony or paralysis is apt to occur, and it is best to relieve the bowels at once, without wasting time in the use of purgatives or of soapsuds enemata. Use two ounces each of the sulphates of soda and magnesia, with a drachm each of turpentine and dried oxgall, in a quart of warm water through a high rectal tube.—*International Journal of Surgery.*

HANDS AND FEET AFFECTIONS.—(New Orleans Medical and Surgical Journal.) A patient suffering from the commoner affections of the hands and feet is hardly likely to think of a medical practitioner as a resource for relief. The average layman or laywoman gets the idea that the physician's work does not go beyond a bad complexion and similar affections. Barbers, druggists, and especially chiropodists and manicurists, have become specialists in this line to the damage of their clients, and in this article Dyer directs attention to what we call the commoner affections of the hands and feet, namely, corns, bunions, warts, and diseases due to the sweat-glands. In the summer many people complain of the hands and feet perspiring, and this may often result in a chronic condition of hyperidrosis, and is often complicated with a tendency to inflammation, causing much pain, and possibly confining the patient to bed. The condition is apparently easy to treat: 1. Advise the use of white castile soap and restrict excessive drink. Give a small dose of strychnia internally for a long period, about six weeks. For the hands, the use of a three- to five-per-cent alcoholic solution of salicylic acid frequently during the day; for the feet, a like remedy in powdered form, namely, salicylic acid half dram, tannin one dram, powdered arrowroot and rice starch, of each half an ounce, dusted in the stockings every day. Where the feet are inflamed and not blistered, simple bathing for twenty to thirty minutes in hot water, with four ounces of laundry starch to the gallon, should be of service before the use of powder. In the more chronic condition lead water may be used on cloths applied at bedtime, and if the blisters suppurate, nothing relieves better than a five- to ten-per-cent solution of ichthyol. The commoner conditions of the nails of the hands and feet are: Ingrown nails, run-arounds, hangnails, horn-nail, and felon. The hangnail often causes paronychia, and as often the felon. It should be held in place and collodion painted over it. When infection occurs, touch the spot with carbolic acid and mop afterward with alcohol, or touch it with nitrate of silver. If the infection goes further, nothing is so good as a 1 to 1,000 bichlorid dressing kept constantly wet, which often

aborts felons, and is much better than the soap and sugar and other compounds of household practice. The ingrown nail can be treated by scraping a notch and clip to keep the flesh away from the nail. In severe cases it may require the removal of a portion of the nail and redundant skin. Warts will almost always disappear under daily painting with salicylic acid in collodion (5 per cent) solution, excepting in the acuminate type. Other remedies which he uses are formalin solution, corrosive sublimate, and sulphur. Corns and bunions are sacrifices to civilization, and the original conditions are relieved by the wearing of properly adjusted shoes and protecting the part with a simple cotton and collodion dressing. A useful and convenient remedy is tincture of iodine. Bathing in starch water is also advisable, and should be practiced twice a day. He speaks in condemnation of the commoner practice of letting chirpodists work on the feet with a knife that is always unclean, helping only to promote disease and the practice of the operator. For the soft corn between the toes, ordinary greasing and putting a film of cotton over it usually will suffice. Salicylic acid plaster, 10 per cent, is useful for flat corns not especially painful. Most of the local applications are suitable, but the above seem to be the ones here especially recommended.—*Journal American Medical Association.*

Special Notices.

OWING to the great increase in the substitution of inferior and harmful remedies for those of well-known and proven value, we advise purchasers, for their protection, to insist on having Celerina, and not to accept any thing that is offered as "just as good," or cheaper, which unscrupulous druggists continue to offer in order to make a few cents more. You know what you want, insist on having it; if he has not got it, go somewhere else, or get him to order it for you. We think this will explain to you the necessity of getting the genuine article, in order to produce satisfactory results, for in some cases of failure it has been owing to the substitution of an inferior article, thus not only doing you no good, but even imperiling your life. But as this hydra-headed monster, like Banquo's ghost, "will not down" as long as dishonest men exist, the best way to check it is to purchase in original packages, and be sure that you get in that form.

TO REMOVE FROM THE HANDS THE ODOR ACQUIRED IN MAKING A POST-MORTEM. Every physician who has had occasion to make a post-mortem examination is familiar with the peculiar cadaveric odor which clings so tenaciously to the hands. Those also who have treated uterine cancer know the sickening odor of the vaginal discharges, and how impossible it is to wash it from the hands. In such cases the hands should be washed thoroughly with warm water and soap, and then listerine applied full strength. If listerine had no other use than this it would be of great value, but beside this, it is of inestimable value as an antiseptic, either internally or externally.—*Massachusetts Medical Journal.*

SANMETTO IN UTERINE CONGESTION.—Dr. M. J. Halsey, of Fowler, Ind., writing, says: "I have found Sanmetto perfectly satisfactory, and I take pleasure in recommending it in cases of uterine congestion, having tried it and proved its efficacy in such a case. I have placed it in the foremost of my list of favorite remedies for congestion of any mucous membrane in the body."

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"NEC TENUI PENNĀ."

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No. 7.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

PREPUTIAL DIVULSION VERSUS CIRCUMCISION IN THE YOUNG.

BY JOHN B. ENRIGHT, A. M., M. D.

Professor of Anatomy and Instructor in the Laboratory of Anatomy in the Kentucky School of Medicine.

It has not been many years since the removal of ovaries was such a custom that any woman who ventured to get on an operating-table usually left it minus her primal generative organs. And at the present day almost the same can be said of the prepuce. The boy, no matter how perfectly formed, is only too frequently the victim of semi-castration, or, in other words, robbed of the hood that protects his balanitic extremity. A reckless and seemingly unwarrantable sacrifice of the prepuce is made on the altar by old as well as young and enthusiastic surgeons. Let us examine this question to see what are some of the benefits to be derived, as well as any harmful results that may ensue, and at the same time consider if or not divulsion is not the better as well as the more physiological desideratum. Dismissing circumcision as a religious rite, let us inquire into the feasibility of its performance both from a hygienic and physiological standpoint.

When there is great redundancy there is no question but what the operation is called for. But, on the other hand, when the glans penis is only scantily covered while in a flaccid state, the operation is just as strongly uncalled for, and many good reasons can be advanced to show that the procedure is not only unwarranted, but is, in many

cases, absolutely contra-indicated. Many boys are born with a partial phimosis, no redundancy; but, on the contrary, a seeming paucity of foreskin. These are the favorite subjects of the surgeons who have a mania for practicing circumcision, and they are forever afterward ball-headed possible votaries that may remotely worship at Sodomy's bestial shrines. However, if not circumcised, why not? and what have you to offer in lieu that is better.

In the writer's opinion divulsion is *par excellence* the better thing to do. By circumcision we rob the glans penis of its normal protection and forever expose it to the rubbing and friction of the wearing apparel, which is not always of the softest consistency, but is often composed of the coarsest kind of fabric. This exposure results in the glans penis becoming callous and bereft of that tenderness and perfect development of the end "bulbs of Krouse" which are requisite for the acme of gratification to be experienced during the copulative acts in after years. Not only is this true, but experience and observation warrant the statement that even in the marital state, on account of this benumbed condition and failing to get this natural passion gratified, and unless strongly fortified by a superb moral equilibrium, a circumcised victim will only too frequently wander away from home to bestial haunts, where he seeks in vain satiety by having this callous head warmed and drawn by the lowest of unnatural methods. These are some of the things circumcision often leads up to. On the other hand, by the careful introduction of a pair of blunt-pointed forceps (closed) into the preputial orifice and gently breaking up any adhesions that may exist between the inner layer of the prepuce and the limiting membrane of the glans penis, the operator is usually able to get the extremity of his forceps back to the cervix, and then gently opening the handles of the forceps, the blades will likewise separate and stretch the prepuce.

By the use of some antiseptic lubricant the foreskin can be made to glide backward and forward over the glans penis. It is seldom that more than a few drops of blood are lost as a result of the tissues being stretched. Usually when the prepuce is retracted for the first time a more or less quantity of heretofore confined smegma will be found in masses adjacent to the cervix. These vary in size from a millet seed to that of the half of a good-sized bean. When these masses are removed they are usually hard, and a constant source of irritation has been eliminated. The enureses of baby boys, the kicking off

of bed-clothes at nights or other times, the tardiness in learning to talk, even stuttering and stammering, and many other nervous phenomena are frequently due to irritation of the glans penis and to the prepuce being too tight. Divulsion of the prepuce removes the cause of the disturbance and usually results in all these various perverted nervous manifestations disappearing. In neglected cases it may be necessary to dissect off the prepuce from the glans penis on account of the organization that has taken place between the two. This is somewhat tedious, but a little patience and perseverance will reward the operator with finding the cervix.

Not long since a young man, nineteen years old, consulted me, and I found his prepuce firmly adherent as far forward as the *meatus urinarius externa*. I cocainized the parts and proceeded to dissect. When I was about half way back, the sensibility having partly returned, the young man suggested that we wait until the following night to complete the operation. The next evening I finished it, and found two very large, half-bean-shaped pieces of smegma that had undoubtedly been there for years. When a penis is otherwise perfectly formed save a more or less narrowed condition of the prepuce and not an excessive redundancy, divulsion is certainly the proper operation. A tight prepuce is a cause of masturbation, the irritation there causing a fondling that soon leads to the habit. Divulse thoroughly, so that the penis can be kept clean, and the habit is not likely to be formed.

Conclusion. When a prepuce is narrow, divulse it, and especially in children, where the absence of diseased conditions is the rule. Never circumcise a non-diseased child unless there is great redundancy, and even then leave an abundance of foreskin, and by all means leave the frenum intact; for at best the glans penis will become callous, and reason tells you that as the boy reaches maturity he can not experience that acme of gratification which he would otherwise enjoy were his organ in its pristine condition.

LOUISVILLE.

THE MANAGEMENT AND TREATMENT OF TYPHOID FEVER.*

BY G. L. BARR, M. D.

Member of the Kentucky State Medical Society, Daveiss County Medical Society, etc.

You will pardon me if I ask your indulgence in a paper on a subject that has been worn threadbare. Though discussed by all, we have only approached the land, anchored in a small inlet, and picked up a few pebbles along the beach of this great ocean of typhoid fever.

This is a disease that claims its victims of all ages, from the cradle to old age; so I shall not invite your attention to any thing novel in the management or treatment of typhoid fever, but simply give the result of my personal observations, and endeavor to deduce from this and the current literature on the subject what I conceive to be the most rational and practical management and treatment of this disease.

I do not accept any specific treatment of typhoid fever, hence no hard or fast lines in the management or treatment can be drawn. The disease is of a complex nature, presenting several types, many aspects, and numerous complications, consequently all cases can not be managed or treated alike; hence in a paper of this scope only a general management and treatment can be suggested.

The management of typhoid fever which meets with my approval is characterized not so much by brilliant therapy as by common sense and the application of simple, well-tried agents. If our patient is hot, we give him cool drinks; if he is wasting, we give him nutritious, easily-digested food; if the heart is weak, give tonics and stimulants. Place the patient in the most comfortable and pleasant room in the house—a room that is well ventilated, plenty of light, and as free from noise as possible.

The doctors that have to treat this disease in the country have many cases in the cabins without shade, cool water, or a good, intelligent nurse, hence we are taxed to determine what is the best we can do. After having our patient as comfortable as possible, a good nurse comes next. A competent trained nurse is best. Having done this, we may summarize the principles of management under the following heads:

1. Control the fever within reasonable bounds.
2. Maintain the strength by judicious feeding.
3. Meet special symptoms and complications by suitable remedies.
4. Care and scientific nursing prolonged through convalescence.

* Read before the Daveiss County Medical Society, at Owensboro, Ky., September 11, 1901.

By keeping the fever within reasonable bounds without expense to the heart lies the secret of lessened mortality. In so doing we regulate and limit the tissue waste, and in a measure the deleterious effects of the fever upon the heat centers.

The means in common use to control fever are the full bath or Brand treatment, the sponge bath and cold pack, and the antipyretic medicines. We will briefly consider them in the order mentioned:

The full bath, at temperature of 65° F., seems to be the most favored in the German and American hospitals, and, estimating its value by reports from various hospitals, also in some private practices, it appears to be exceedingly efficacious, and is meeting with increased favor. The difficulties, however, attending its proper administration in private practice will prove an insurmountable barrier to its general adoption.

The method of controlling fever within the reach of all, which can be applied under any circumstances, and is wholly free from danger or objection, and which has received the stamp of approval by the profession at large, is the sponge bath and cold pack. It possesses the merit of reducing temperature to any desired degree without reducing strength, controlling nervous symptoms, and of being grateful instead of repulsive to the patient. It can be applied by any one, and without skilled assistance. The temperature of the water may be regulated to suit the wishes of the patient, and varied to such a degree as may, in the judgment of the physician, meet the exigencies of the case.

Of medical antipyretics as a means of controlling fever, there is little to be said except to condemn their use, save in certain cases, as they disturb the nutritive processes of the body and depress the heart, disturb the stomach, hence hinder digestion. In chosen cases of the asthenic type the coal-tar derivatives, to which I make special reference, may be used with benefit and safety when they are guarded by heart stimulants; but in the majority of such cases, where their use is admissible, practically the same results may be obtained by the systematic use of cold water, with no risk to the patient.

In importance not second to any thing in the management of typhoid fever is the maintenance of strength by judicious feeding. Not only are Peyer's patches inflamed and ulcerated, but the alimentary canal through its entire length is in a state of catarrhal inflammation. The red tongue, the loss of appetite, the diarrhea, all indicate the impairment of digestive powers, hence we are face to face with the necessity of meeting the ravages of wasting disease on one hand and a

crippled digestive apparatus on the other. As between the two evils, overfeeding is far more injurious than underfeeding. The constipated cases, indicating as they do only slight gastric or intestinal catarrh, are, in my experience, the most easily managed. From the day typhoid fever is suspected until convalescence is well established, all food should be liquid, possessing the maximum of nutritive power with the minimum of refuse material.

It is better to consult the taste of our patient than to insist upon any one article of diet. While milk is a staple and an ideal food, there are many well-founded objections to its use in certain cases. Milk, buttermilk, soups, meat broths, teas, extracts, jellies, eggs, raw or soft-boiled; gruels, teas and coffee, chocolate, wines, fruit juices, etc., afford quite a varied and appetizing menu from which to select through a long series of weary days. All sweet and starchy foods should be given with caution because of their tendency to fermentation. Have regular intervals to feed—four to six times in twenty-four hours. Give proper time for food to digest; give your patient plenty of cold water; give it plain, iced, acidulated, or aerated, and give it freely.

Medication. At the beginning, cleanse the alimentary canal with calomel; give sufficient sulphate of quinine to subdue all malaria, after which treat the patient symptomatically, and use as little medication as possible. If the patient is constipated, keep the bowels open with castor oil; give it every second or fourth day, as the case demands. If there is diarrhea, give opium alone, or with bismuth or silver nitrate, which usually controls it. A favorite prescription of mine in these cases is oil of turpentine, tincture opii, and salol in syrup of acacia. I have found it to act well.

Tympanitic distension of the bowels is often a distressing symptom in typhoid fever. Empty the bowels by an enema; give oil turpentine and salol or carbonate guaiacol; in severe cases I use rectal tube; compresses wrung out of ice-water or turpentine stupes should be applied externally.

Sleeplessness. Ten or fifteen grains of sulphonal or tryonal usually gives rest, although some nervous, irritable cases demand morphia, and it is best administered hypodermatically. Keep the mouth and teeth clean by frequent washing with water containing a few drops of carbolic acid, or vinegar and water, or listerine. A clean mouth is very essential, as it aids in digestion and adds to the comfort of the patient.

Hemorrhage. Keep the patient absolutely quiet with morphia; withdraw all food or drink; apply an icebag to the abdomen over the right iliac region. Opium should be increased until drowsiness and contraction of the pupils follow. Ergotine should be given hypodermatically at short intervals; enema of ice-water, not exceeding four ounces at a time, may be repeated at short intervals; remove the pillows from under the head, raise the foot of the bed, and, in a grave case, sterilized normal salt solution may be introduced hypodermatically, four to six ounces at a time.

Indications for Alcohol and Other Stimulants. I prefer to reserve alcohol until called for by signs of waning strength. That it is a remedy of the greatest value I freely admit, but in mild cases, and in young persons of previous good health and habits, it is, as a rule, not needed; in persons of feeble constitutions, and those past middle life, and in all severe cases, alcohol should be given systematically. A low, muttering delirium, feeble, dicrotic pulse, and dry, red tongue are the indications for alcohol. In these cases it should be given freely in such quantities as will sustain strength and quiet the patient. Other stimulants, as aromatic spr. of ammonia, carbonate of ammonia, or strychnia each have their place in certain cases.

Management of Convalescence. Keep the patient in bed for ten days or two weeks after the temperature has returned to the normal, as the ulcers may not be healed; during this period keep him on a light diet, composed of milk, soft-boiled eggs, jellies, soft toast, ice-cream, custards, egg-nogs, etc. At first his movements should be slow; he may soon be allowed to take exercise short of fatigue in the open air; mental excitement should be avoided. Keep the bowels open by an enemata; put your patient on some good bracing tonic. If there be a predisposition to tuberculosis, codliver oil and creosote should be given for two or three months. Relapses should be treated as primary attacks, and recurrences in the same manner.

ROME, KY.

TUBERCULAR PERITONITIS.*

BY B. C. FRAZIER, M. D.

Literature on tubercular peritonitis is very meager. In 1862 the first case was recorded. Sir Spencer Wells opened the abdomen under mistaken diagnosis and found tubercular peritonitis; simply closed the incision with a recovery. This seemed to be a starting-point for operative procedure for this condition. In a few years the operation grew still more popular. König in 1884 recommended laparotomy in all cases. This affection of the peritoneum is especially interesting to the surgeon; first, because of the difficult diagnosis; second, probably because of the many sources of infection. The most frequent source of infection in children is probably through the mesenteric glands; in women who have menstruated and borne children the infection frequently is through the genital tract. The primary lesion is situated most frequently in the intestine; according to Phillips in 74 per cent, and according to Sick in 65 per cent. Next frequently it is found in the female genitals, in 26 per cent, according to Sick. The liver and spleen are often secondarily involved by extension of the disease along the fibrous tissue of the stroma. Many cases are reported to have been secondary to tubercular pleurisy, but I have never seen a case following pleurisy. Tubercular peritonitis is not a common sequence of phthisis pulmonalis, though in the late stages, when the tubercular infection is so general, we have infection occurring through the bowel from the mucous to the serous surfaces. These cases are seldom seen by the surgeon, as it is too late to offer any hope at all by surgical interference. Many of the cases occur in robust, healthy-looking subjects; those who have not been ill, or have not shown any evidence of chronic disease. Kelly gives a list of cases in which there were 80 per cent that presented a good general appearance, that is, good flesh color, with 20 per cent poorly nourished, anemic and sickly.

Tubercular invasion of the peritoneum is claimed by many to be always a secondary infection, but I am sure, in a great many cases, there can be no proof of tubercle bacilli in any other organ of the body. In a great many of these cases there seems to be an immunity given by this invasion against other tubercular infections. There may have been a latent focus that has become active, thus causing the rise of fever and

* Abstract of paper read before the Kentucky State Medical Society, May, 1901.

the general infection, producing all the classical symptoms. It is generally conceded that tubercle bacilli may lay dormant for a long time, though I can not understand or explain how it is so, for we know that the life of tubercle bacilli is short when exposed. Tubercle bacilli can not always be found in these early ascitic cases, or even in the early stages of adhesive or fibrous cases. The extreme age seems to be exempt to some degree. The age at which most of these cases occur is between twenty and thirty years. I think there is no doubt but that the female is very much more likely to be the subject of this condition than the male, although some former statistics of autopsies place the male far ahead. A very much larger per cent of females have been subjected to operation. Whether or not the larger number occurring have been in the female it is impossible to say, for women are much more likely to submit to operation than men, and we might not see as many cases in the male, because they refused operation and went on to recovery, and a positive diagnosis was not made, or that they died, thus adding to the number credited to the male mortality list. Since laparotomy is being done continually for diagnosis, tubercular peritonitis has been found to exist very much more frequently than was formerly thought. It is frequently found to exist in conjunction with some other abdominal disease, and had not produced sufficient symptoms to have caused a diagnosis of this condition, or to have even been suspected.

Diagnosis is difficult in a great many cases, and when the onset is sudden and attended with great pain it may be mistaken for appendicitis, hepatic colic, or renal colic; when the onset is insidious and attended with general debility, fever, and abdominal swelling it has been taken for tubo-ovarian abscess, or even ovarian cystoma. With the slow approach, attended with fever, malaise, and abdominal tenderness and flatulency, it is hard to differentiate between tubercular peritonitis and typhoid fever. Sometimes the diagnosis can be made by microscopical examination of the curettage of the womb; that is, with a case in point where the diagnosis is doubtful, if tubercle bacilli be found in the curettage, it is very reasonable evidence of the correctness of the diagnosis. Tuberculine is not a positive agent in diagnosis, although it is considered an aid by many.

Diagnosis, as a rule, is made by exclusion. If in doubt and the patient is in fair condition, and there are all the facilities for operation present, exploratory section is justifiable in competent hands, as less than three per cent have died from the operation *per se*; and with well-selected cases there should not be even that large a mortality rate.

The classification of this disease is of no material importance, still the pathological as well as the clinical forms as classified by Adelbert have been generally accepted.

I think there should be some amendments to his classification. He gives the ascitic, the fibrinous, and the ulcerative forms. I think there should be added plastic and caseous. I have seen all these conditions existing in one peritoneal cavity. The ascitic form is the only form likely to exist alone. The other conditions are only stages of one disease. It has not been very many years since it was taught that tubercular peritonitis was always fatal, and only a very few years since the reverse of this has been generally taught.

The treatment is divided into medical measures, aspiration, introduction of air or other substances into the general cavity, and laparotomy. In my opinion aspiration should not be resorted to unless the cutting operation is refused.

There are some grave cases in which medical and palliative treatment will have to be instituted and carried out. In these cases of palliative treatment, food, tonics, change of air, etc., will have to be the chief reliance.

Ascitic forms are probably the most common, and in some respects the most important, and should always be treated by free incision through the abdominal wall and peritoneum, the incision being large enough to afford careful exploration and to admit of the fluid being entirely sponged out. There should be thorough enough evacuation of the serous contents not to necessitate the use of a drain. Cases that have been drained always have a longer convalescence and a more uneven recovery, the fever recurring at intervals, and the patient compelled to remain in the hospital longer. There are many disadvantages attending the use of a drain, some of which are a chance of infecting the tract of drainage or establishing a fistula. Operation in the ascitic form is generally a simple one, there seldom being any complications; but the plastic, caseous, and the suppurative add much more to the possibility of a hard and tedious operation, to say nothing of the added risk and more unfavorable prognosis. Still, with the subject in a fair general condition, the prognosis is far more favorable than medical or palliative treatment could offer. In the simple plastic cases it is advisable to separate all the adhesions, especially the band-like ones, causing a possibility of obstruction.

There is, however, a condition sometimes found in these adhesive cases where conservatism is wise; that is, where the whole abdominal

contents seem to be one solid mass, it even being very difficult to find a small point of cleavage. These cases are often found to have caseous nodes under this fibrous capping, and even to have suppurative processes that are still encapsulated. The breaking up of these adhesions causes considerable hemorrhage, delay to the operation, thus causing additional shock and further infection with death speedily following. This probably is the only inoperable condition when the disease is confined to the peritoneal cavity.

In these adhesive cases the omentum is dark, and there is a good deal of thickening and some discoloration, and fine seed-like deposits are usually felt and seen all through the peritoneum and omentum thus affected. In such conditions it is usually advisable to remove this omentum if there are any nodules that you suspect of being caseous, as they are apt to break down and suppuration to ensue. It is well to treat these cases with iodoform dust, care being taken not to use too great a quantity, as there has been iodoform poisoning in peritoneal absorption. In the caseous stage the omentum and mesenteric glands are the usual site of the caseous nodules. Curettage of these nodes, followed with a thorough wiping with iodoform gauze, constitutes the general treatment. This condition is more likely to necessitate the use of drainage, the drain either being simple gauze, iodoform gauze, gauze wrapped in rubber tissue, or fenestrated rubber tubing. I do not think it advisable to use gauze in deep drainage unless it is protected by rubber tissue, as there is a likelihood of breaking up adhesions and causing internal hemorrhage. There is also more likelihood of infecting the external wound. In the removal of gauze drainage that is unprotected there is much more pain than in removal of other drains. The question of irrigation might be discussed with any of these conditions, but the ascitic form is seldom drained. In the caseous cases irrigation is more harmful than otherwise. If the surgeon has taken careful pains to protect the toilet of the peritoneum, the chances are that he will not infect the parietal or visceral peritoneum in evacuating the caseous contents, and if irrigation is practiced, it is very difficult indeed to keep from infecting larger areas.

The suppurative form is the last we will consider, and it is the one which gives the poorest results, and the one which demands the most careful management. The suppurative kind is more especially likely to involve the peritoneum of the lower abdomen and pelvis.

It is a fact that in suppurative processes in any part of the body (that are called tubercular) we have several other pus-producing organisms

present. To deal most effectively with these cases it depends on the points of suppuration and area whether or not irrigation should be used. If there are many points which are remote from each other, there is a great possibility of infecting still larger areas. Irrigation in these cases will have to be left to the judgment of the operator. In localized suppurative points, the healthy peritoneum can be protected by non-absorbent sponges, thus affording complete irrigation of the pathological process. There are many fluids for irrigation, but the normal saline solution used so generally now is probably the one in greater favor. It is not safe to leave these cases without drainage, and either tubal or gauze wrapped in rubber tissue is as near an ideal drain as can be procured.

Parker Symms presents a study of the surgery of tuberculosis of the peritoneum. He says that in the majority of cases of tuberculous peritonitis laparotomy will produce a permanent cure. A variety of theories have been put forth to explain why laparotomy should cure: First, that the cure is due to the use of chemical germicides; second, that it is due to the use of drainage; third, that it is due to the exposure of the abdominal cavity to the sunlight and air; fourth, that the removal of ascitic fluid alters the blood-circulation; fifth, that bacteria may be introduced which do good by producing a toxalbumin fatal to tubercle bacilli; sixth, that the traumatism establishes fibrinous peritonitis, the bacilli becoming encapsulated and their growth being arrested; seventh, that the cure is owing to the advent of multitudes of leukocytes, and hence results from phagocytosis; eighth, that the mere opening of the abdominal cavity brings a physiologic change in the peritoneum which makes it cease to be a proper soil for the growth. Not one of these theories can be demonstrated to be true, and some of them may be discarded. Cure does not depend upon the use of disinfectants, because in a long series of cases cure was obtained when no such agents were employed; in fact, there are more cures reported without the use of such agents than with them. That cure is not brought about by the relief of pressure due to the withdrawal of ascitic fluid and the consequent improvement of the blood-circulation is shown in cases in which tapping does not benefit the patient. That drainage is not the reason of the cure is shown by the fact that patients do better without drainage than with it. The other theories can not be either proved or disproved, but it should be borne in mind, for instance, that a tuberculous joint can not be cured by exposing its interior to sunlight and air. We are forced to the

conclusion which Tait arrived at, that opening the abdomen produces a change in the physiologic character of the peritoneum which makes this membrane able to destroy the tubercle bacillus.

Adelbert, with 308 cases, and Roersch, 50, making 358 cases with complete analysis, gives the following summary :

Of these, 70 per cent (250) are reported as cured ; 53 remain cured for over two years, 79 for one year, and 118 for a half-year ; 34 remain unaccounted for. There were only 20 deaths from the immediate effects of the operation, 10 of which were from septic peritonitis ; 51 cases died in a few months from some tubercular affection.

Frees has reported 18 cases operated on since 1888. The diagnosis of the disease was made from microscopic examination of the nodes. All the cases were of the ascitic form. The immediate mortality was 0 ; 6 of the 18 cases have remained well ; 9 died before the end of the first year.

Frees insists that a diagnosis of tubercular peritonitis should never be made without the microscope. In support of this he cites two cases which proved to be non-tubercular ; one was simple fibrous peritonitis, the other cancer of the peritoneum.

In conclusion, if in doubt, operate ; if your diagnosis is correct, remove all the disease possible, remove all the peritoneal fluid, and relieve any complications that exist. Tubercle of lung is not a contra-indication, as relief is secured from the tubercular process in the peritoneum, and that assists the general condition, giving the patient a better chance to resist the invasion of the organism in the lungs.

Miss E., aged twenty-seven. Good previous history, with exception of one attack of colic about three years ago, supposed to be intestinal. Milliner. Was taken with a chill at three o'clock of the afternoon of March 5th, with severe pain in right side. I was called at 10:30 the same evening, and found her suffering excruciatingly, so that she cried out every few minutes. Pain started in right hypochondriac region, and extended well up in the right lung and shoulder of the same side. Pulse 130 ; temperature 103.5° F. ; respiration about 50, when in less pain about 40 per minute. She was suffering so intensely that I gave one-fourth grain morphine hypodermatically. That kept her quiet for about four hours. I was called again in the early morning before breakfast. I saw her about 7 o'clock, with temperature 100.5° F. ; pulse 120 ; respiration about 40. No cough. I could not detect any pleurisy ; patient had some vomiting, which I took to be from morphia. I ordered hydrarg.

chlor. nit. gr. 3, antikamnia gr. 20, nitro-glycerine gr. $\frac{1}{4}$, in four capsules, one every hour until all were taken.

In the evening of the 6th she was a little more comfortable, with temperature 100° F. Passed a poor night, but felt less pain next morning. I forgot to state that hot applications were kept up over the liver and right side all the time, night and day. Purgative acted well, and patient had some relief until the evening of the 7th, when she had another chill, with pain all over bowels, worst pain over the large end of stomach. The next day my office mate, Dr. Louis Frank, saw her with me and made a careful examination, but did not make a positive diagnosis, but felt sure that the gall-bladder was the seat of the trouble. There was little change for two days, when I asked Dr. Ap Morgan Vance to see her with me. He also thought it gall-bladder trouble, and advised operation unless symptoms abated in twenty-four hours. Patient was having some distension both over the stomach and bowel. No nausea. Enemata of hot water were given frequently, as that enabled her to get rid of flatus and relieved the pressure from distended bowel. At one time it was thought she passed some pus. About the 18th she began to do real badly, and I decided to operate. On the 21st I opened the abdominal cavity just over the gall-bladder region, and on introducing my finger I found adhesions between the inferior border of the liver and bowel. The adhesions were slight, and I soon found the gall-bladder to be normal with no stones. On further investigation I found spider-web-like adhesions all over the visceral and parietal peritoneum, being adherent everywhere. They were broken down, and the wound closed and patient put to bed. She recovered rapidly; no fever after the third day, but little pain after second and third day, and was up in two weeks. She has gained flesh, and weighs more now than for several years.

LOUISVILLE.

VACCINATION.*

BY A. D. PRICE, M. D.

As the years come and go, as the peoples of the earth multiply and intercommunication increases by means of rapid transit, the importance of vaccination grows apace.

There is nothing new to offer you on this important subject. The object of this brief paper is to elicit discussion on the most perfect and certain preventive measure known to the medical world, to urge upon the profession the importance of teaching the public, at all times and under all circumstances, the necessity of being rendered immune to smallpox, the most dreadful of all diseases, and to learn from the individual member his experience relating to the complications that have occasionally followed vaccination.

It is surprising to know how quickly a community becomes unprotected against smallpox. Children are born and grow to be men and women without the protection of vaccination; many even go through life without giving it a thought till confronted with the contagion. The medical profession only can remedy this sad condition by teaching the public its importance, and by urging upon the lawmakers the necessity of enacting laws to secure its adoption.

The prevalence of smallpox in various sections of the country, and its liability to develop in any locality, render this subject of special interest at this time. Were every person properly vaccinated and revaccinated at stated intervals, smallpox would become an unknown disease. This is proven to be true by the results in communities where these regulations are enforced by law. The necessity, then, of urging and securing the universal adoption of this life-preserving measure is imperative.

Only the healthy should be vaccinated. Those in ill-health, those exposed to acute infectious diseases, and the subjects of chronic dermatoses should not be subjected to this procedure unless there has been an exposure to the contagion. Every child should be vaccinated when two years old, revaccinated in five years, and thereafter every ten years. It may be done, however, at any age if necessity requires.

The virus should be pure; the glycerinated calf-lymph only should be used. "The lymph properly prepared with chemically pure glycerin

* Abstract of paper read before the Kentucky State Medical Society, May, 1901.

and sterilized water, and sealed in sterilized glass tubes, is found free of the various streptococci and staphylococci, of the streptococcus of erysipelas, and of the bacillus of tuberculosis," and is, therefore, devoid of danger.

Vaccinal immunity, it is claimed, is less than 1 per cent, and small-pox immunity has been demonstrated to be acquired in ten days after vaccination. "Vaccinia is an acute infectious disorder which ordinarily runs a mild and uneventful course," but grave accidents, often due to other causes, sometimes arise.

Unfavorable conditions may develop in cases of diabetes mellitus and hemophilia. Pustules may become hemorrhagic; adenitis, ulceration, abscess, septicemia may at times be serious complications; erysipelas and tetanus may be the result of inoculation. Gangrene, otitis media, nephritis, convulsions in children, neuritis, keloid and various dermatoses have been laid to its charge.

General vaccinia is the result of the virus being transported by scratching or by the blood-current. Tuberculosis, according to some observers, is possible, not probable. The occurrence of syphilis is impossible where the bovine virus is used, and consequently does not demand any consideration. "The more complete the vaccination the greater the protection." The virus should, therefore, be thoroughly inserted in three or more places. The physician, in doing vaccination, should be as careful as in the performance of a capital operation. Clean hands, clean arms, clean instruments, aseptic dressings are imperatively demanded. The old haphazard and unscientific method is responsible for many of the unfortunate complications.

To teach people how to live, how to avoid disease, how to grow old gracefully, peacefully, and happily is a matter of continual and persistent education. To the medical profession belongs this duty, and it would not shrink from it if it could. The general practitioner and the obstetrician should, therefore, see that the families under their charge are properly vaccinated and revaccinated.

HARRODSBURG, KY.

TREATMENT OF TYPHOID FEVER.*

BY BASIL M. TAYLOR, M. D.

The domain of medicine, though infinitely beyond the grasp of man's mind, is divided into two great subjects, physiology and pathology. When nature puts into existence a being she attains to but one end, and that is to maintain physiology.

Every organ in the body suffers from the effects of toxins from typhoid fever. The mind and the muscles can rest, but the stomach and heart must work or the struggle soon ceases. These are the two sentinels upon which depends the safety of the patient. They must be congratulated if they have a physician who walks hand in hand with them through the struggle, but they are to be pitied if he tramples them under his efforts to cure typhoid fever.

There is one rule to guide us in the treatment of disease—"treat the patient and not the disease." Keep in touch with nature, and have a scientific reason for every thing you do and say; treat the case as nature treats it, and you will be nature's assistant.

The constant irritation of the delicate mucous membrane of the stomach by medicine for two or three weeks may change a once healthy stomach into a diseased one that may end the patient's life. Injudicious feeding may cause intestinal catarrh, from which the patient may never recover. The responsibility of the physician in prolonged diseases is far greater than he realizes; it is no honor to make a "catch-all" out of a healthy stomach and bowels during typhoid fever, and make a physical wreck out of what was once a perfect type of physical manhood. This has been done in many cases. It is lucky for the doctors that the laws of God and man apply only to willful murder and maiming.

When we look over our record and see the number of lingering cases of typhoid fever, we may safely say that 90 per cent of these cases could have been different if we had treated the cases skillfully. We may nurse and feed the patient faultlessly, loving hands may smooth the pillow and make the bed easier, anxious friends may kindly remember, but one irritating and useless drug may defeat our plans and wreck the progress of the case. Then whose is the fault? It is not the drug, for pills and bullets are blind, and wound friend and foe alike. You can claim the fault as your own. We must reason from cause to effect, and from effect

*Abstract of paper read before the Kentucky State Medical Society, May, 1901.

to cause. Meet every indication with its corresponding remedy, and give medicine for its effect. Routine feeding and prescribing is vicious practice ; a drug that is indicated in the father may kill the son, though they lie side by side with the same disease. The sum total, then, is know your patient, or he will be unrecognized by his friends if you do not give up the case.

As typhoid fever is a septic disease, we must favor elimination and assimilation. No army can win a battle without ammunition. Toxines must pass out as rapidly as they are absorbed ; the system has enough to do to eliminate the toxines from the fever alone, without the extra labor of eliminating undigested food and useless drugs. The functions of the stomach are threefold—digesting, absorbing, and germicidal. The three work in harmony, and to impair one impairs the other two ; keep in perfect harmony with the trinity. To interfere, then, for a day with the functions of the stomach places your patient in an extra hazardous position.

The bacilli of Eberth are selfish enough to claim all the praise, and they do not mention it that the doctor was responsible for the extra sickness after they finished their contract with the patient. When called to see a patient with typhoid fever, open the journal and examine his liabilities and assets. Is the patient older than his age ? If so, why ? Is his pulse excited, weak, or strong ? If so, why ? Is he nauseated, full of aches and pains ? If so, why ? Is there gurgling in the right iliac fossa, and is his tongue foul ? If so, why ?

If there are these symptoms, be sure that you can wash your hands clean of their cause. There is no necessity for foul tongues, delirium, sick stomach, pains, headache, insomnia, high temperature, weak pulse in typhoid fever. If we will practice physiology instead of medicine, we will avoid these.

When you get a fever patient in bed, give him a rest ; I mean a rest from the crown of his head to the soles of his feet. There will be a drain on the system—a disturbance of the equilibrium between assimilation and waste. The patient lives on himself to a certain degree ; then he must minimize waste in every organ. The patient's mind must not be upon his business ; if he has been irregular in his habits, we must at once establish a regularity ; in fact, we must, as nearly as possible, reorganize his organic harmony and let each organ do its work.

Let us divide our cases into two classes : First, those who are healthy prior to the acute disease ; second, those who have had some chronic

disease for years. In the first cases we have an opportunity to show our skill or to put the patient into the second class for the next case of fever. Case "A" is in the first class; he is a perfect type of physical manhood; he has been complaining for a few days, and has called at the doctor's office several times for medicine. He was given calomel for biliousness and quinine for malaria. His already inflamed bowel is irritated by the calomel, and his liver wonders why it is dosed and stirred up for a trouble that is ten or fifteen feet down the alimentary canal, and over which it has no control. He grows worse, and, after a chill, a restless night with aches and pains, he sends for the doctor. His liver, irritated by the calomel, has poured out a lot of bile, and the patient has been vomiting it into the slop-jar for several hours. The sight of so much "bile on the stomach" proves to the doctor that he is very bilious and must have more calomel. (He fails to realize that the slop-jar is more bilious than his patient.) The calomel is repeated, and so are the deleterious effects of the drug.

Now, keep in harmony with the trinity. The patient has been taking medicine irritating to his stomach, and has been eating indiscriminately since the first symptoms of his trouble, and the chill, high fever, and headache tell us of the fact. If the physician recognizes typhoid fever at once, he informs the nurse that he must begin to nourish and stimulate the patient to tide him over a long and dangerous illness. He directs the patient to take a glass of milk or bowl of soup every three hours, and if his pulse is a little accelerated from the toxemia, he mistakes this for an indication for stimulants, and directs him to take a tablespoonful of whisky every three hours until his return. How many of us have been guilty of this mistake? A link in the trinity has already been broken, and we make the separation greater and perhaps permanent by overfeeding and stimulants.

A healthy stomach has enough to do to digest three meals a day, but when the stomach of Case "A" takes typhoid fever, it needs a rest for the long task it has before it. You cause it to work constantly by giving food every three hours. This is kept up for a week, until he begins to vomit; you have been pouring antiseptics and septicums down him day and night, disturbing his sleep to give him food, so that if he dies the family and you can say that every thing was done for him that could be done. This is true in one sense of the word. No wonder it takes him weeks and months to recover; the doctor and disease make a combination disastrous to any patient. His temperature is running to a hundred and four

or five degrees ; his expression is dull ; he is delirious, sordes are upon his teeth ; he sleeps with coma vigil ; his pulse is weak, there is diarrhea, there is gurgling in the right iliac fossa. We have now got our patient into the great state called the "typhoid state," a state that we ought to be ashamed of. Each glass of milk gives impetus to the trouble ; they pass into the bowels undigested, and the patient poisons himself hourly.

Now about the whisky you have been giving. Here is another fatal mistake. Why ? Because the pulse, laboring under the poison, is accelerated, and you mistake this for weakness or an indication for stimulation. The heart needs a rest instead of stimulants ; stimulation causes overwork and exhaustion at the time when good circulation is most needed. Let the heart alone ; it knows its own business better than we do. It is useless and disastrous to stimulate a weak heart-muscle.

Now for the treatment of Case "A." The best rule is, if you do not know what to give, do not give any thing ; guess-work in medicine is bad practice.

There already exists an inflammation in the bowels, and it is unsurgical to cause severe peristalsis by giving purgatives. Calomel is then unsurgical. If the patient is nauseated I withdraw all food until his stomach is in condition to digest it ; then I feed him three times a day, and give him such food as he can digest perfectly.

If the patient is not hungry at meal time I direct him to wait until he has an appetite. If the stomach is taken care of, this waiting will not occur very often. His food consists of beef tea, beefsteak scraped into a pulp and heated gently, crackers rolled fine, eggs, either raw or cooked, and soups in small quantities and highly nutritious. Never allow your patient to eat any thing that he is required to masticate, but always prepare food so it needs only to be mixed with the saliva ; thus his stomach will digest perfectly the food, and the patient will be nourished and the germs starved, and his stomach will get the needed rest. There will be no self-poisoning from decomposed food that has passed out of his stomach. Orange or lemon juice will be grateful to the patient and will do no harm. When the temperature runs over 100 degrees I use as an antipyretic antifebrine or a tepid bath for twenty or thirty minutes ; about three doses during the day and one at bedtime will keep the temperature down, and will make the patient more comfortable.

I prefer the bath where it can be given. The patient is bathed two or three times a day with tepid water for about thirty minutes, and the

temperature will fall. If the patient is a little restless at night I give him a sedative. Bromidia acts nicely and leaves no bad effect. As a rule patients will rest well after a few nights if the nurse will not disturb them every few hours during the night to give medicine and food. This is a point that I wish to emphasize. Avoid disturbing a patient during his sleep. Rest is essential to health, and of course the patient needs it. Let him sleep until he awakes of his own accord. If the tongue is dry it shows a morbid condition about the stomach and must be watched with care. I let the patient drink all the water his stomach will absorb.

It is next to impossible to give antiseptics enough to render sterile the alimentary canal; then, too, most antiseptics are gastric irritants, and their continued use is dangerous. If there is much decomposition I use small doses of some sal cathartic until the canal is cleansed, and then I use tincture iodine and carbolic acid or duotal in small doses until their effects are contra-indicated. Keep the mouth clean, and let the patient chew tolu for a few minutes during the day. In my efforts to guard the stomach I do not forget the colon and rectum. I irrigate the colon three times a day with warm water, and if there is a catarrh I use with the water concentrated extract *pinus canadensis*, and then at night inject into the sigmoid flexure Dr. J. M. Mathews' prescription of almond oil, bismuth, and iodoform. This will relieve the catarrh and prevent the lower bowels from absorbing the putrefactive material, and thus help to relieve the system of what plays an important part in the rôle of typhoid state.

If water is not taken in sufficient quantities by the stomach, I inject about a quart into the colon and leave it for absorption.

Case "B." This class, of course, gives us much trouble, because we begin the struggle at a disadvantage, but we have an opportunity to use the same care and judgment as in Case "A." Most chronic diseases are in the lungs, kidneys, heart, or alimentary canal. I have had consumptives pass through typhoid fever as easily as robust patients, but dyspeptics are a source of worry to the physician. We must watch digestion with especial care. If there is myasthenia with fermentation, we must give a small amount of food easily digested and slow to ferment. The white of an egg given raw with pepsin and hydrochloric acid suits this class of patients. It is digested and leaves the stomach in about an hour and a half, and this gives the weak stomach the much-needed rest.

Do not give milk to a patient with catarrh or myasthenia. Milk given to a patient every three or four hours will kill more patients than the fever. Treat the stomach and feed it just as you would if the

diseased stomach was the only trouble the patient had. The colon is irrigated and the baths are used as detailed in Case "A."

In order to prove my position about no stimulants and feeding only three times a day as being not so disastrous to my cases as you may claim, I will give a brief statement of two typical cases of "A" and "B," which were treated as above described.

Case "A." Male, married, age twenty-four. Previous health good. First visit October 8th; temperature 102° F.; pulse 90; he had been sick four days; he was nauseated and restless; food was kept away for twelve hours. On the fourth day his temperature was 102° F.; pulse 76. October 14th, temperature 100° F.; pulse 80. October 31st, temperature 99° F.; pulse 80. There was not a single stimulant given, and his temperature and pulse were at no time during his illness as high as on the first day, being 102° F. and 90, respectively. He made a perfect recovery.

Case "B." Female, age twenty-four; had been nursing child for six months; she was very pale and anemic, and had been too weak to do her housework. I saw her on August 7th; she had been sick four days with diarrhea and chills and general malaria; her temperature was 103° F.; pulse 100; her diarrhea was painful, and was due to colitis; her digestion was poor, and no appetite. I used injections as above described, and fed her as her stomach could take food. On August 13th her temperature was 101° F., pulse 100; her colitis had checked, and she was gaining in strength. I gave her syr. albumen iron co. at the beginning. Her facial expression had grown bright; her tongue was clearing up; her appetite was good. August 23d, temperature 100.5° F.; pulse 116. August 27th, temperature 98.5° F., and pulse 106. She was not fed but three times a day, and she was not stimulated at all. I am glad to say she did not starve to death, neither did her heart give up the fight for lack of stimulants. I gave her an opportunity to get well, and she took advantage of it.

In the treatment of your cases let your motto be, "Remember the stomach first, the colon next."

GREENSBURG, KY.

REPORT OF TWO CASES OF ANEURISM.*

BY J. L. ATKINSON, M. D.

I bring you nothing new. This report is offered only to emphasize some cases of aneurism that are not easily diagnosed, and in which a false diagnosis might lead to serious results.

CASE 1. In 1896 Dr. C. D. Moore, an ex-army surgeon and a man of more than ordinary ability, referred a case to me of a young man about seventeen years of age with a tumor about the size of an ordinary lemon on the left forearm, at about the juncture of the lower and middle thirds, over the ulnar artery. Dr. Moore gave me his opinion that it was a solid tumor. The tumor was very tense but slightly elastic; it caused a great deal of pain, but was not tender on pressure. There was no fluctuation or bruit, and prolonged pressure did not affect the size of the tumor. Aspiration gave negative results. I applied an Esmarch bandage on the proximal side of the tumor and opened it, finding a cavity filled with fibrinous clots. The diagnosis was then easily made. The cavity was cleaned out, the vessel tied, and the patient cured.

CASE 2. In October, 1899, Dr. B. T. Black asked me to see with him a colored man, forty years of age, with a large tumor on the inner aspect of the left thigh just below Hunter's canal. The tumor had first appeared about four months previous to that time, but had subsequently reduced somewhat in size, and the man went about his work. About two weeks before I saw the patient the tumor increased considerably in size and became quite painful. The doctor was having it poulticed, as he thought there was an abscess impending. I found a tumor as large as a small cocoanut, quite tense, somewhat elastic, no pulsation, no fluctuation, and no bruit. There was no local elevation of temperature over the tumor; the whole lower half of thigh was edematous. I could find no pulsation in the popliteal artery, and the leg indicated impaired circulation. After a careful examination I expressed the opinion that the case was aneurism of the femoral artery, and proposed ligation in Scarpa's triangle, to which both the doctor and patient consented.

The second day afterward we returned to the patient's home prepared to operate, inviting some other of our town physicians to be present. An older physician, who went out with us, made a careful examination of the patient and expressed a dissenting opinion, and strongly advised non-

* Abstract of paper read before the Kentucky State Medical Society, May, 1901.

interference. His counsel prevailed with the patient. I saw nothing more of the patient till the latter part of August, 1900, after he had been to consult a physician in a neighboring town. That physician gave it as his opinion that the tumor was a sarcoma, and that the only treatment that promised relief was a high amputation, as the bone was probably involved. The man came home and became a patient of Dr. H. G. Sanders, who called me in consultation September 29, 1900. I found that the tumor had grown to large dimensions, extending from the knee to the apex of Scarpa's triangle, and presenting the same characteristics as before; except at the most prominent part, corresponding to the original site, was a softened area, but it was not fluctuating. The patient was then suffering a great deal of pain. I made a careful examination and affirmed my former opinion, and again advised ligation and emptying the sac.

The patient was very much at sea on account of the diversity of opinion of the doctors, and declined to have the operation done at that time. He continued to suffer till on October 4th I was again sent for, and the patient begged for immediate relief. With the assistance of Dr. H. G. Sanders I proceeded to operate at once. I made an incision as for ligation in Scarpa's triangle, placed the ligature in position without tying, caught the artery below the ligature with forceps, and then opened the sac by free incision. With my hands I scraped out more than a gallon of tough, laminated, fibrinous clots. A cavity was found extending from the apex of Scarpa's triangle to the knee, and involving the whole inner side of the thigh to that extent. It would have easily accommodated a child's head at its largest part. I then tied the ligature, cleaned out the cavity well, packed, applied a compress and bandage, and put the patient to bed. He made a good recovery, and is now a well man with two good legs.

CAMPBELLSVILLE, KY.

URETHROSCOPY.*

BY WILLIAM R. BLUE, M. D.

To the untiring efforts of Grunfeld, of Vienna, Fenwick, of London, and Otis, of America, is due the position the urethroscope now holds as a means of diagnosis and treatment of urethral diseases. As a diagnostic agent, what does it do? First, with a proper light it enables us to see the entire urethra and locate any abnormal condition of same. Second, with it and only with it are we able to differentiate positively between organic and spasmodic stricture. This I consider of great importance, especially if a radical operation is advised for the treatment of the stricture. There is no doubt in my mind that thousands of spasmodic strictures are incised annually when such an operation is not indicated. It is really harmful, and could be prevented by the use of the urethroscope. Third, some of you have met with cases of close stricture in which you have been unable to pass the smallest filiform bougies after a lengthy trial, though an opening be present. By illumination with the urethroscope pressing against the band, in all of these cases you are sure to find the opening and pass the bougie into the bladder, thus saving the patient an external operation.

As an aid in treating chronic urethral diseases, I can not say too much in its praise. I have had a number of cases in which it has enabled me to effect a cure when all of the other modes of treatment had failed. With the urethroscope we can see and treat the following conditions as well as if they were on exposed surfaces: Granulations, mucous patches, urethral chancroids, hypertrophied follicles and abscesses, nodular strictures, curvatures of the penis, and polypi.

I will cite only two of the many (to me) interesting cases I have treated. Without the urethroscope these patients would still be sufferers:

CASE 1. Mr. X., from western part of the State, aged thirty-eight years; married; has two children. First attack of gonorrhea at eighteen years of age. Discharge ceased after eight weeks' treatment. At twenty-four years he had a second attack. This stayed with him for two years. Consulted physician, who located three strictures. Radical operation was performed. The patient stated that the surgeon cut the entire pendulous urethra on roof. Hemorrhage was profuse. He was sounded for two months at intervals. Has had slight discharge since.

*Abstract of paper read before the Kentucky State Medical Society, May, 1901.

Following the operation pain came on, which was referred to the bladder neck. This had been present ever since. He consulted another surgeon for his complaint. After carelessly examining him he pronounced it neuralgia of the prostate. He was advised to avoid sexual excitement, and told that the pain would "wear off" in time.

Eighteen months ago he came to me for treatment. Examination of his urine found it to be normal, barring a few pus and epithelial cells. Boric acid was given in five-grain doses every four hours for twenty-four hours before the examination, and kept up during the entire treatment. Patient was cocainized and 30 F. urethroscope introduced. Four inches back an ulcer was found on the roof of the urethra about an inch long and one eighth of an inch wide at its widest point. After mopping it off I carried my index finger along the lower surface of the penis to the end of the urethroscope; there I exerted pressure with the end of my finger and told the patient that was the seat of the trouble. He remarked that I was right, and that it was the first time it had been located. Application of stick sulphate of copper was made to the ulcer daily with no change. I curetted it under cocaine and applied the copper as before. In three weeks the ulcer healed, only a slight scar remaining. Saw the patient in March; there has been no return of his symptoms.

CASE 2. Mr. W., local, single, aged twenty-six years. First attack of gonorrhea at twenty-two years of age. This was complicated with chordee, which he broke. Wound healed, leaving the penis curved downward and slightly to the right. After preparatory treatment similar to Case 1, he was cocainized and examined with No. 22 F. urethroscope. One inch from the meatus I found a stellate cicatrix. Curettage of cicatrix relieved the curvature, wound healing quite promptly. Patient has since married and has an heir.

As to urethroscopes: I have tried nearly every kind on the market. The most satisfactory one is the Schall. With this instrument you can study the urethra as a cylinder, and not as a collapsed tube with its many folds, as you see it with other makes. This is a very important point, for frequently the diseased condition lies lurking in the urethral folds, and is often overlooked with other makes of the urethroscope.

LOUISVILLE.

OPPOSING THE ROUTINE REGIMEN ADOPTED IN THE MANAGEMENT OF CHRONIC BRIGHT'S DISEASE.*

BY LEON L. SOLOMON, A. B., M. D.

In preparing this short paper it has been chiefly my aim to call your especial attention to several salient facts, namely, first, in the management of a given case of so-called chronic Bright's disease (without stopping now to differentiate between the several inflammatory and degenerative types which mark a great difference in the exact pathological anatomy of the case) it is always essential to remember that the slow smouldering fire may from time to time become a bright red flame ; in other words, to care for a chronic exudative nephritis or a chronic interstitial nephritis (so-called non-exudative) is to manage the respective acute exacerbations which will occasionally occur in the course of these two chronic ailments. Second, to relieve the kidneys of all possible overwork—on the one hand by a careful regulation and supervision of the habits of life, the diet, clothing, baths, exercise, sleep, stool, etc., and to restore and preserve the proper excretory function of the organ—is an all-important duty, which, if accomplished, may mean for our patient many months, if not years, which he may often spend in the quiet and peaceful enjoyment of life, and in fair health. Third, let us remember the presence or absence of albumin in the urine is not all of Bright's disease, though the case can often be approximately measured and the prognosis fairly estimated and gauged by this important adventitious ingredient.

I am convinced that we are often guilty of managing Bright's disease in a routine if not desultory fashion ; in attaching to the presence of proteid matter in the urine, with or without the additional presence of renal derivatives (as revealed by the microscope), too much importance, and of reaching too positive and convincing conclusions that the patient is doomed to sooner or later meet his just retribution in a different atmosphere, simply because of this one ingredient ; and then when the diagnosis is once fairly fixed, I make bold to admit we are very often too lax in the regimen we adopt for the future welfare of the case. A work carelessly done were often better undone or not done. This statement particularly applies to the management of morbus Brightii, which, though the morbid process itself rarely requires or even justifies

* Read before the Kentucky State Medical Society, May, 1901.

vigorous measures, surely is always deserving of careful and individual treatment. It is not my province, in this symposium which your secretary has arranged, to discuss the etiology of any of the Bright's diseases, but in so far as certain causative factors have their positive bearing on the therapy of the disease, I wish, at least, to mention several.

It has been said by Prof. George Johnson that renal degeneration is a consequence of long-continued elimination through the kidneys of products of faulty digestion, and since his time it has been demonstrated conclusively that the elimination of products of malassimilation is productive of granular degeneration in these organs. Fothergill looked upon liver incapacity favoring faulty digestion and assimilation as the foremost etiological factor, to which Allbutt added mental worry and overstrain (by arresting secretion) as most likely to provoke such incapacity. Furthermore, we are now aware that over-indulgence in animal food is a direct cause, and that excrementitious products in the circulating fluid, such as are present in tuberculosis, syphilis, diabetes, gout, chronic rheumatism, scarlatina, measles, diphtheria, etc., are each of some moment in at least starting the process or predisposing to it, and our therapy is incomplete if it does not recognize the part these one or more etiological factors play. It is, then, not sufficient to instruct the patient to avoid condiments and highly seasoned foodstuffs, nor viands, nor to restrict the amount of meat and institute a skim-milk diet, or some other plan, but the whole dietary and habits of life must be interpreted for the patient, and as carefully studied as is now done by the Walker Gordon laboratory method devised by Professor Rotch for selective infant-feeding. Ordinarily it is wise to restrict the meat diet, allowing only white meat in small quantity, with fish; also soups, broths, gruels, and fruits in abundance, but no greater error, it is now considered by text-books on dietetics, can be committed than to compel the general run of sick people—diabetics, for example—to adopt a fixed, inflexible diet list; and this applies also to Bright's, for is it not found that some cases not only tolerate but actually thrive on certain prohibited and interdicted articles of food?

Now, just so wide a scope of latitude as characterizes the case of glycosuria with reference to food also asks for consideration when the case of Bright's is before you. And just here I wish to emphasize the frequent good from the administration of fats, which not a few of the cases we meet can readily digest and assimilate. It must be borne in mind that our therapy is useless in the constitutional diseases if, not-

withstanding, nutrition suffers and strength fails. Every fifteen grains of fat assimilated results in nine calories of heat, transposable into energy or vital force; the same amount of carbohydrate yields but four calories, and by the strict routine regimen we are prone to remove the greater per cent of albuminous food, which yields a like four calories for each fifteen grains assimilated. Stop, I ask, long enough to make a calculation. Man is but an engine; he requires 2,500 to 3,000 calories to run him from 4 o'clock to-day to 4 o'clock to-morrow, or through any other given twenty-four hours. Whence the source of this energy? Where is he to get his units if you deprive him of the raw material wherein latent energy resides?

Finally, to sum up the meaning of this paper, I ask for the case of Bright's not only a consideration of the points made, but a keener appreciation of the influence exerted by the disease on the blood-pabulum proper (with its consequent profound anemia), and also on the heart-muscle and arteries, and if these receive your vigilant attention I am constrained to say the therapy of chronic Bright's disease is otherwise, as a rule, simple.

LOUISVILLE.

Reviews and Bibliography.

Progressive Medicine, 1901. Diseases of the Thorax, Heart, Lungs, Blood-Vessels, Skin, Nervous System, and Obstetrics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Higiene of Madrid; Member of the Association of American Physicians, etc. Assisted by H. R. M. LANDIS, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Price, per annum, 4 cloth-bound volumes, \$10.00. Philadelphia and New York: Lea Brothers & Co. 1901.

The September volume of this excellent series of books is before us, and is fully in keeping with those of the past. The subjects treated in this issue of the work are as follows: Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood-Vessels; Dermatology and Syphilis; Diseases of the Nervous System, and Obstetrics.

We commend this volume to our readers as being an excellent one in every particular. The chapter devoted to diseases of the viscera is alone worth the price of the book.

A Manual of the Diseases of the Eye. For Students and General Practitioners. With 275 original illustrations, including thirty-six colored figures. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Second edition revised. New York: William Wood & Co.

The second edition of this excellent little book is before us. Dr. May, of course, makes no pretense of going into the minute details of the diseases of the eye. It is simply a manual, well-written, and each thing in its order. The chapters are as follows: External Examination of the Eye by Means of Inspection and Palpation; Subjective or Functional Examination of the Eye; Objective Examination of the Eye Conducted in the Dark Room; Oblique Illumination and the Ophthalmoscope; Affections of the Eyelids; Diseases of the Lachrymal Apparatus; Diseases of the Orbit; Diseases of the Conjunctiva; Diseases of the Cornea; Diseases of the Sclera; Diseases of the Iris; Diseases of the Ciliary Body; Diseases of the Choroid; Diseases of the Uveal Tract; Uveitis; Intraocular Tumors; Glaucoma; Diseases of the Vitreous; Diseases of the Lens; Diseases of the Retina; Diseases of the Optic Nerve; Amblyopia and Functional Diseases of the Retina; General Optical Principles; Optical Consideration of the Eye; Errors of Refraction; Anomalies of Accommodation; Disturbances of Motility; Ocular Therapeutics, and General Rules of Operations upon the Eye; there being twenty-six chapters in the entire work. It is one of the best books of its kind that we have ever seen for the general practitioner who must attend to certain demands in this special line, as injury, acute trouble, and all sorts and kinds in which the general practitioner's advice is sought. This little book will give him a clear and concise idea of the proper course to pursue. It is handsomely illustrated, containing quite a number of colored lithographs demonstrating the germs that are met with in connection with conjunctival inflammation, as diphtheria, etc. Colored photographs of the retina are numerous, demonstrating its various diseased conditions. The appearance of the second volume so soon guarantees its worth, and we predict a rapid sale.

A Text-Book of Bacteriology. By GEORGE M. STERNBERG, M. D., LL. D., Surgeon-General United States Army; Ex-President of the American Medical Association and of the American Public Health Association; Honorary Member of the Epidemiological Society of London, of the Royal Academy of Medicine of Rome, of the Academy of Medicine of Rio de Janeiro, of the Societe Francaise d'Hygiene, etc. Second revised edition. New York: William Wood & Co. 1901.

The second edition of this magnificent work of Dr. Sternberg is before us. It contains more than seven hundred pages, and is illustrated by heliotype and chromo-lithographic plates and engravings, numbering more than two hundred altogether. The illustrations are excellent in every particular, showing the great care on the part of the author in his efforts to detail things as found in the laboratory. The book is well gotten up, and

may be said to be an ideal of the bookmaker's art. Several additions have been made to this edition, including a section on protective inoculation in infectious diseases and one on bacteria of plant diseases. The plan of this volume differs very materially from the first edition, and has been so arranged as to meet the needs of the practitioner and the student.

The chapter on protective inoculation in infectious diseases contains nearly one hundred pages, and is worth the price of the whole book. Every thing about this important and great subject that is known up to date is found in this chapter. It would be difficult to make a critical review of the entire work. Suffice it to say that it has no equal in the English language. We commend it to our readers as one of the very best books of its kind in the market.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-Book Specially Adapted for Students of Medicine, Pharmacy, and Dentistry. By WILLIAM SIMON, PH. D., M. D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, in the Maryland College of Pharmacy, and in the Baltimore College of Dental Surgery. Seventh edition, thoroughly revised. With sixty-six illustrations, one colored spectra plate, and eight colored plates, representing sixty-four chemical reactions. Cloth, \$3.00 net. Philadelphia and New York : Lea Brothers & Co. 1901.

The fact that this book has gone through its seventh edition in the space of a few years is enough to recommend it. However, we wish to say that this is a most excellent, practical work, and is in every way to be considered one of the best books of its kind in existence.

The chapters on chemical physics and physiological chemistry have been elaborated, and are fully abreast of the times. Much of this book has been rewritten and a great deal of new matter added. The first part is devoted to chemical physics; the second treats of the principles of chemistry; the third and fourth parts are devoted to the consideration of the non-metallic and metallic elements and their compounds; the fifth treats of analytical chemistry; the sixth treats of organic chemistry; the seventh gives some of the principal facts of physiological chemistry. The decimal system has been adhered to in all weights and measures; degrees of temperature are expressed in the same system, the corresponding degrees of Fahrenheit being also mentioned. This is probably the most complete work on chemistry in the English which comes within the scope of text-books for students. No word of praise could add any thing to what the professional public already knows about this great work.

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ERNEST G. MARK, A. B., M. D., and JOHN R. WATHEN, A. B., M. D., Assistant Editors.

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THE NATIONAL DISGRACE.

If we were called upon to state what we consider the greatest disgrace to the United States, we would say its divorce laws. The ease and facility with which divorce can be obtained in certain portions of our country has enabled those who desire to take advantage of it for immoral and other purposes to do so without fear or hindrance in any way whatever. The sacredness of marriage is the foundation of all good society, and when the early Christians lifted woman from the extreme degradation in which she was held by the pagans to the high sphere which she now occupies, they acted wisely. Our modern saying, that "the hand that rocks the cradle rules the world," is true, and as woman is most frequently imposed upon by man, she should be protected in the broadest sense, and that protection will only come through the medium of a universal divorce law. The one adopted by the Bible is certainly the best. The rapid accumulation of wealth in this country has enabled many of the so-called best citizens to defy the laws of the land and the unwritten law also, as is evidenced by the recent marriage of Mr. Flagler. Whatever may have influenced the Florida legislature to pass such a law is unknown to us, but if the members of that august body have any consciences they must at least have some regrets for the results which have followed. The pitiful wail of the insane wife should at least haunt them occasionally to remind them

that they have done her an injustice, and that without any warrant for so doing. It was the recent divorce act that enabled Mr. Flagler to put away his lawful wife because she was insane, and for no other reason. This is only one of the thousands of occurrences taking place all over the country. The fact of it is that with the present divorce laws we are but little better than a set of polygamists. Divorces are granted for the most trivial and nonsensical causes, and these causes are so numerous that it would require too much space in this journal to even think of mentioning the trivial ones, to say nothing of the more grave ones. Doubtless the judiciary are much to blame for this continued and profuse increase of applications for divorce. They have it within their power, and should exercise their jurisdiction, to throw out many applications for divorce. In the recent constitutional convention held in Kentucky the subject of divorce was strictly avoided, much to the disgrace of the fair name of the State. There should be unity of action against this wholesale divorce by all classes of good citizens, and especially by the ministers and judiciary, in abolishing this most abominable practice.

LOUISVILLE'S NEW HOSPITAL.

The Franciscan Sisters of Lafayette, Ind., are now erecting a magnificent hospital in the eastern portion of the city with a frontage of two hundred and twenty-four feet. The front of the building is now up and under roof, and contains sixty-four rooms and ten wards, with ten beds in each ward. When the other two wings are completed the capacity will be two hundred beds. The Franciscan Sisters will have full and complete charge of this grand institution. They have erected and are now conducting a number of magnificent hospitals all over this country. The mother institution is located at Lafayette, Ind., where they have an elegant hospital. This institution will be open to all classes, rich and poor, white and black. The indigent will be cared for without moneyed consideration; the only thing required of them is to obey the rules and regulations of the institution, and accept treatment from the doctors in charge. Contagious diseases and incurables will not be admitted, nor will lying-in women be admitted.

The present expenditure will be \$75,000. The Franciscan Sisters have had much experience in hospital work, and deserve all the

encouragement that a generous public can give, for they are really and truthfully God's ministering angels in human form, their whole lives being devoted to the care of the poor and humble, and their only compensation is their food and raiment. A suitable staff of physicians and surgeons will be selected, and will have care of those who come into the public wards. Any physician in the city may send a patient to this place for the public wards or into the rooms, where a reasonable fee for board and nursing will be charged, as in any other institution of the kind in the city. The hospital will be thoroughly equipped in every particular as regards heat, light, and baths, and will have one of the most elegant operating-rooms in the South. No pains will be spared to make this department as nearly perfect as possible. It is a great acquisition to the city of Louisville, and these good people deserve the fullest praise for placing at our disposal such a magnificent institution.

DR. JOSIAS A. IRELAND.

Dr. Josias A. Ireland was born in Jefferson County, September 15, 1824, and died September 19, 1901. He was reared on a farm, which no doubt had much to do with the development of his great physical body and good constitution. He graduated at the Kentucky School of Medicine in 1851. In addition to being a doctor of medicine, he was a Baptist minister. Dr. Ireland was prominently identified with the Louisville Medical College from its organization to the time of his death, although in the last two years he was not actively engaged in teaching. During his long professional career he was an earnest laborer in the interest of his profession and of humanity, and as a teacher was a favorite with his classes. Many of us were wont to call him "Old Daddy Ireland." This appellation was, no doubt, given to him on account of his fatherly manner. We well remember some verses written by a student who had been ejected from the Louisville Medical College in 1873, one of which runs thus:

"Here's to Old 'Daddy' Ireland,
Ever true to his country," etc.

Dr. Ireland was much beloved by his patients, always having their extreme confidence. He was a sturdy, even-tempered man, and never lost his self-control in the most trying ordeals. He made no enemies, and harbored no ill-will against any one.

Current Surgical and Medical Selections.

ACTION OF ARSENIC.—Gautier has an interesting paper (*Bull. Acad. de med.*, Paris, August 7, 1900) on the rôle of arsenic in the bodily metabolism. Like iodine, arsenic is chiefly contained in the thyroid gland. It is also found in the brain and the appendages of the skin. The amount in the average thyroid is 0.15 mgrm. It occurs along with iodine in the form of a nucleo-proteid, which is excreted, and stimulates the epidermic tissues chiefly. Normal blood contains only a very faint trace of arsenic, less than 0.05 mgrm. per kilo., whereas menstrual blood contains as much as 0.28 mgrm. In the male, the arsenic is being constantly eliminated by the hairs of the head and beard and epidermic scales. In the female there is much less removed in this way, as the epidermic wear and tear is much less, so that periodically the surplus arsenic gravitates to the genital organs, where, if the woman is not pregnant, it is discharged; but if she be pregnant it is utilized by the fetus. Gautier suggests that up to the onset of menstruation the growth of the hair uses up the arsenic, whereas in the adult female there is little growth and falling out of the hair. In males at puberty there is the great development of facial hair, which corresponds to the loss by menstruation. He considers that in the lower animals the growth of the fur or feathers up to the time of rutting, followed by the casting of the coat, represents the male analogy of menstruation. He thinks that this relationship between the epidermic appendages and genital activity holds good also for human beings. Thus pregnant women may suffer from loss of hair and pigmentation and disturbances of the skin, which may be due to the arsenical nucleo-proteid being so much utilized by the fetus that there is not enough available to regulate the nourishment of the skin. In tuberculosis, arsenic may almost entirely disappear from the thyroid gland, and the attendant skin alteration and amenorrhea yield very rapidly to arsenical treatment, especially if it be combined with small doses of iodine.—*The Edinburgh Medical Journal*.

TREATMENT OF SIMPLE FRACTURES.—Bennett (*British Medical Journal*) concludes a discussion of this question as follows:

1. The treatment of simple fractures at present, although less stereotyped than hitherto, is still conducted generally too much upon lines which are traditional rather than rational.
2. The use of splints for long periods is disadvantageous, especially in the form of irremovable appliances, such as plaster of Paris and the like.
3. Speaking generally, the earlier movements of the joints above and below the fracture in a long bone are used the shorter is the time occupied in recovery.
4. The legitimate scope of the operative treatment of simple fracture is limited, and should be confined to (a) cases which are otherwise unman-

ageable; (b) special cases, such, for example, as certain spiral and oblique fractures, mainly of the tibia; and (c) certain fractures near joints in adults, notably of the humerus at the elbow.

5. The operative treatment of recent fracture of the patella is by no means so generally satisfactory or so free from risk as published cases would tend to show; and further, in cases in which the separation of the fragments does not exceed half or even three quarters of an inch, as good results for practical purposes are usually obtainable without operation, although less rapidly.

6. The use of massage and passive movements immediately in simple fracture when the circumstances of the patient and of the practitioner admit of it, either in its entirety or with modifications, is, in the majority of cases, the best means of effecting a rapid and useful recovery.

7. The tendency of late has been to exaggerate the degree of disability and diminution in wage-earning capacity following upon simple fractures.

8. Although no pains should be spared in obtaining perfect position of the fractured ends, moderate displacement, provided it is not rotary, is not necessarily followed by any disability if care be taken by the use of early movements to prevent any matting of the parts around the fracture; in other words, the disability which follows in certain cases in which the position of the united fragments is not ideal is due, not to the bony deformity, but to the adhesion of the soft parts around, which is easily preventable.

9. Having regard to the unavoidable modifications which must be dictated by the circumstances, social and otherwise, of the patient, and by the facilities possessed by the practitioner, no one method of treatment for simple fractures can be insisted upon for routine use, even in cases in which the local conditions are precisely alike.—*Medical Standard.*

THE USE OF NORMAL SALT SOLUTION. —John G. Clark (Progressive Medicine) says the more extensive one's experience becomes in the use of normal salt solution as a stimulant in abdominal operations, the more convincing is the evidence of the benefits to be obtained by its use. During the past four years he has made it a practice to leave at least one liter in the peritoneal cavity, after even the simplest operations. It increases the volume of the blood, lessens its specific gravity, stimulates the cardiac ganglia, and accelerates the circulation. The skin, kidneys, and intestines are stimulated, and all the organs of the body functionate better under its influence. The number of red blood-corpuscles is distinctly increased. Its special use in abdominal cases is to prevent shock, to lessen the effects of hemorrhage, and decrease the virulence of infection. Next to the Trendelenburg posture, the author regards the introduction of the normal salt solution as one of the greatest benefits which have been conferred upon modern surgery in the last five years. Its most marked advantages are claimed to be a lessening of the thirst and an increase in the urinary excretion. Drainage from the peritoneal cavity the author regards as a prob-

lematic benefit, because of the rapidity with which absorption takes place by the lymphatics and peritoneum. In these cases he employs an infusion of large quantities of normal salt solution combined with the elevated dorsal posture. In moribund patients he has seen a marvelous stimulation from this treatment, which safely tided them over the critical period. Submammary infusions are quite as beneficial; they act almost as rapidly as intravenous transfusions, and are devoid of some of the complications which attend the latter. The writer's plan is to leave at least one or two quarts of salt solution in the abdominal cavity after every abdominal operation, and in addition to this a quart may be given beneath the mammary glands, in case the patient shows immediate shock. As a routine practice in all operations, either minor or major, one or two liters of salt solution is given per rectum, for the purpose of alleviating thirst.—*Medicine.*

THE AMOUNT OF DIPHTHERIA ANTITOXIN REQUIRED.—In summing up the study of ninety-three cases, Park says that the local condition in children in markedly severe cases did not clear up as rapidly with 1,000 as with 2,000 units, and in two or three cases he believes death would have been prevented by larger doses. In several other cases better results would have been obtained by 3,000 to 5,000 units. Very large and repeated doses of antitoxin somewhat increase the liability to serum complication, but he thinks it correct to say that the increase in serum effects from very large doses is much less than is generally believed. In his second paper he concludes that antitoxins are, in all probability, substances having the properties of globulin. They can not, with our present knowledge, be separated from that portion of the blood-serum which in susceptible persons produces disagreeable effects. The fact, however, that the antitoxin serum from some horses is scarcely at all deleterious, leads us not to give up the attempt of procuring the serum either by selection of animals or by the treatment of serum itself, which, while antitoxic, is not to any important degree deleterious. For routine practice at present we can scarcely do better than to follow the general plan of using the serum from all healthy animals, which have remained healthy during their period of immunization, and which have in their blood a sufficient concentration of antitoxin. This should not be less than 200 units in each c.c.—*Journal American Medical Association.*

PERFORATION IN TYPHOID FEVER FROM AN OPERATIVE STANDPOINT. Davis (Amer. Jour. Surg. and Gynec.) says: The diagnosis of perforation is not always easy. A decided and sudden increase, especially of pain, in the abdominal symptoms, associated with an abrupt fall of temperature, is diagnostic of perforation. Leukocytosis is a confirmatory sign. Hemorrhage is accompanied with a sudden fall of temperature, but not by a sudden increase of abdominal symptoms. Dullness in the right iliac region is not to be expected in cases of perforation. Localized impairment of resonance may be due to free abdominal fluid; change of position causes

it to disappear. Localized pain and dullness may be due to a plastic peritonitis around the site of perforation. This may be observed perhaps in one case in ten, possibly one in five. It is impossible to recognize that a perforation is about to occur. It is not necessary to operate before a perforation occurs, but it is necessary to operate before collapse is marked. Typhoid fever patients when not in total collapse bear operation much better than was formerly expected. Patients operated on in marked collapse are liable to die on the table. I know of some such cases. Washing out the abdominal cavity with hot normal salt solution, even if no perforation is present, seems to improve the condition of the patient at the time of operation, and to favorably influence the subsequent course of the disease. Operate as soon as the diagnosis of perforation is made. It is less dangerous for the patient to run the risk of having an operation done during the first period of depression than to wait and run the risk of having collapse preclude all operative measures. In operating, incise as for appendicitis, and not in the median or semi-lunar line.—*Memphis Medical Monthly.*

TRAUMATIC NEUROSES FROM THE STANDPOINT OF A SURGEON.—Bevan (Jour. Amer. Med. Asso.) says:

1. Real injuries of the nervous system present positive and immediate symptoms.
2. Those alleged injuries of the nervous system, without positive and immediate symptoms of gross lesions, are either cases of malingering or abnormal cerebral states, traumatic neuroses, or a mixture of the two.
3. Traumatic neuroses are the result of two factors: First, a brain readily affected by suggestions; second, suggestions furnished by an accident with or without injury to the individual, suggestions furnished by sympathetic care or a craving for sympathy, and lastly and of greatest importance, suggestions furnished by medical attendants.
4. To establish a diagnosis requires the immediate and sometimes protracted observation of the patient, as in the study of any psychosis. The supposed refined means of diagnosis, as the dynamometer, esthesiometer, and electricity, are seldom of value and are often of positive harm as suggestions to the patient.
5. These cases recover rapidly under proper surroundings and advice when the continuing causes are removed. Recovery may be indefinitely postponed under improper surroundings and advice.
6. No secondary degenerations of the nervous system follow traumatic neuroses. The pathologic conditions due to an old standing traumatic neurosis are the degenerations of disuse and the general deterioration of the individual from confinement, lack of exercise, dejection, etc.
7. The subject of traumatic neuroses will not receive its proper place until the medical profession recognizes their responsibility in the development and continuance of these conditions, and until proper means are provided for the punishment of malingerers and their alleged medical experts.

EXCISION OF THE SHOULDER-JOINT.—(A. R. Shands, M. D., Medical Semi-Monthly.) Tuberculous disease of the shoulder-joint is rare. Dr. Young reports that in 2,292 cases of orthopedic affections treated in the Orthopedic Department of the Hospital of the University of Pennsylvania there were only two such cases.

Reviewing the literature upon the subject, these figures are practically confirmed. The text-books dispose of the subject in very few words, but all agree that excision for relief of extensive osteitis of the head of humerus is quite justified by the excellent results obtained, but excision of the shoulder-joint should never be made as a routine practice, for under conservative treatment cures are so frequently made, even though an absolutely ankylosed joint is the result, that the patient has an exceedingly useful arm because of the free motion of the scapula. Almost every motion can be affected except the overhead one. Excision of the shoulder in gun-shot injuries is an operation of great value, well demonstrated in our recent wars.

The writer was unable to find the report of any case of excision of the shoulder in which more than the head and neck had been removed, but reports a case of his own in which seven and one half inches of the humerus with the head had to be excised to remove all of the diseased bone, leaving the patient a very useful arm.—*St. Paul Medical Journal*.

EXCLUSIVE SOUP DIET AND RECTAL IRRIGATIONS IN TYPHOID FEVER.—Seibert (Arch. of Ped.) has obtained the following result by pursuing the above regimen :

1. Delirium, headache, insomnia, nausea, vomiting, and tympanites usually disappeared within forty-eight hours of treatment.
2. Tympanites, nausea, and vomiting never developed in any patient, even when complicating pneumonia was present.
3. The fur on the tongue disappeared within a few days.
4. Appetite came frequently on the fourth day of treatment, even when the thermometer registered 102° to 103° F.
5. Even excessive diarrhea (fifteen to twenty-five daily stools) disappeared invariably within first week of treatment.
6. In all uncomplicated cases the temperature began to decline within twenty-four to forty-eight hours after the beginning of treatment, and invariably would reach the normal figure within ten to twelve days.
7. In cases complicated by pneumonia, nephritis or phlebitis, when treatment began the temperature usually remained in accord with the inflammatory conditions found until these also disappeared, while the cerebral, gastric, and intestinal disturbances usually subsided as rapidly as in the uncomplicated cases, excepting anorexia.
8. Complications, when not present at the start, were very rare, and then usually developed within the first two days.
9. Intestinal hemorrhage was noticed in three cases, none ending fatally. Perforation did not occur.

Special Notices.

ANTIKAMNIA AND HEROIN TABLETS.—Our readers will find in this number the announcement of a new remedial preparation, viz., "Antikamnia and Heroin Tablets," each tablet containing $\frac{1}{2}$ grain Heroin Hydrochloride (muriate) and 5 grains Antikamnia. All members of the medical profession should familiarize themselves with this combination, and we respectfully advise our readers to look up the advertisement and send for samples. The advantages of this tablet are fully illustrated by a report of cases submitted by Dr. Uriel S. Boone, Professor of Pharmacology and Surgery, College of Physicians and Surgeons, St. Louis. We reprint three of said cases, as each has some particular feature which successfully called into use in a most beneficial manner the synergetic action of these two drugs:

Case 1. J. P., athlete. Suffering from an acute cold. On examination found temperature 101° with a cough and bronchial râles. Patient complained of pain induced by constant coughing. Prescribed Antikamnia and Heroin Tablets, one every four hours. After taking six tablets, the cough was entirely relieved. Patient continued taking one tablet three times daily for three days, when he ceased taking them, and there has been no return of the cough or pain.

Case 2. Ed., H., age thirty. Family history—hereditary consumption. Hemorrhage from lungs eighteen months ago. His physician had me examine sputum; found tubercle bacilli. After prescribing various remedies with very little improvement, I placed him on Antikamnia and Heroin Tablets, prescribing one tablet three times a day and one on retiring. He has since thanked me for saving him many sleepless nights, and while I am aware he never can be cured, relief has been to him a great pleasure and one which he has not been able to get heretofore.

Case 3. Wm. S., age twenty-eight. Lost twenty-five pounds in last thirty days. Consulted me July 9th. I thought he most certainly would fall victim to tuberculosis. Evening temperature 101° , with night sweats and a very troublesome cough with lancinating pains. Prescribed $\frac{1}{16}$ gr. atropine to relieve the excessive night sweats, and one Antikamnia and Heroin Tablet every four hours, with the result that he has entirely recovered and is now at work as usual.

Neither in these, nor any other of my cases, were any untoward after-effects evidenced, thus showing a new and distinctive synergetic action, and one which can not help being beneficial and useful to both patient and physician.

SANMETTO IN URETHRAL STRICTURE.—Dr. Jos. Swindell, of West Burlington, Iowa, writing, says: "I have been using Sanmetto for several years. I find nothing that suits me as well in genito-urinary diseases. I am using it right along in conjunction with treatment of urethral stricture. It soothes, checks, and prevents smarting and inflammation that is so common after passage of bougie. Its ease of administration and formula should recommend it to the profession."

ECTHOL.—Ecthol exerts a decided influence on eczema, and can be used to advantage in several different conditions. In cases of moist and inflamed lesions, with great soreness and irritation, it may be given in teaspoonful doses; and the more markedly the eruption is purulent the more decided the effect. It may also be used with manifest advantage when the patches are greatly infiltrated and the inflammation is subacute in character.—*American Journal of Dermatology and Genito-Urinary Diseases.*

THE Phosphates of Iron, Soda, Lime, and Potash, dissolved in an excess of Phosphoric Acid, is a valuable combination to prescribe in nervous exhaustion, general debility, etc. "Robinson's Phosphoric Elixir" is an elegant solution of these chemicals. See advertising pages.

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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No. 8.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

USES AND ABUSES OF ARSENIC.

BY F. C. SIMPSON, M. D.

Arsenic is one of our most valuable medicines, and one that is not as popular as it should be among the profession generally. Many practitioners who do not see much of skin diseases seem to have an idea that arsenic is a remedy which can be administered in almost every lesion of the skin with advantage, and fail to recognize that, as a rule, it is contra-indicated whenever the layers of the skin are inflamed, being most useful when the epiderm is dry and improperly nourished, and of very little use when the corium is inflamed. Psoriasis is a typical disease of the former class, and in its treatment arsenic is a standard remedy. As stated above, the medicine should not be prescribed during the inflammatory stage of a skin disease. When used, it should be kept up for weeks, even months. As a result of the constant employment of arsenic when it ought not to be used, we see cases where great damage is done by its too free administration. We must also remember that the drug given in large doses is capable of producing some renal irritation as well as irritation of the stomach and intestines, and that a condition of irritability of the mucous membranes of the body generally are sometimes caused by too large a dose. Dr. Hare calls our attention to the use of arsenic as a valuable appetizer in doses of a minim of Fowler's solution with ten grains of bicarbonate soda and a tablespoonful of infusion of gentian taken before meals. I have used it this way and certainly found it a very valuable tonic. It is also use-

* Read before the Louisville Medico-Chirurgical Society, September 20, 1901. For discussion see p. 306.

ful in certain forms of morning diarrhea and nausea; also it is valuable in the treatment of various forms of anemia, in which case it must be given over long periods.

It is hardly necessary to remind you that it is almost a specific in the treatment of chorea, and its value as a blood tonic in malaria, and its great value in diabetes and asthma. It is held by Murray and others that it is useful in those asthmatic cases which are young, and the old with marked emphysema. It is also valuable in cases that have nasal disorders due to hyperemia of the respiratory mucous membrane. While recognizing the value of arsenic, we must not forget that it is possible for it to produce evil influences; that it is capable, when administered too long a time in large doses, of causing pigmentation of the skin, irritation of the stomach and of the respiratory tract, and, more serious still, peripheral neuritis.

In the treatment of chorea I find it of the greatest value. You must use it in increasing doses, and this is one of the few diseases in which arsenic is so valuable that you have to give it in ascending doses, even to tolerance. I find it of the greatest value in anemia; even the obstinate and often incurable cases of pernicious anemia yield better to arsenic than to any other known remedy; it is to be given in small doses and kept up for months. In the small dose you are not so likely to produce stomach disturbances. The effect of the drug in this disease is not due to its increasing the number and quality of the red blood corpuscles, but rather to its preventing or delaying their destruction in the portal circulation. By timely use of laxatives and careful watching the dosage you may easily adjust the blood-making forces.

Dysmenorrhea, frequently noticed in women with a tendency to asthma or subject to chronic skin diseases, is often cured or benefited by arsenic.

Arsenic ranks next to quinine in treatment of malaria; for instance, chronic cases, where quinine has lost its power, are markedly benefited by arsenic.

Neuralgic headaches and anemia of malarial origin are very amenable to the drug. Fowler first reported the remarkable efficiency of arsenic in neuralgia of the intercostal and fifth pair of nerves.

It is equally as valuable in these cases, whether the disease be due to malaria or general debility. I have frequently gotten very good results in pulmonary phthisis, especially in those cases where there is excessive expectoration and slow degenerative processes. The good

effect of the arsenic is shown by the rapid improvement of their general condition, there being a lesser pulmonary secretion, a general improvement in the appetite, and increase in the body weight. It is contraindicated in phthisis where the cough is hoarse and paroxysmal, with but scanty secretions and tendency to hemorrhage. When I want to improve the nutrition of my patients, I find it the most valuable of tonics. It has not the power of increasing red blood cells, but it stops the destruction of the cell and thereby shows its great influence on the general nutrition. I do not know of any tonic that we can expect to give us better results than arsenic when administered in the proper way. In regard to the preparation used, it is just a matter of preference. I find Fowler's solution to be the most useful in a general way, and use this preparation more than any other. I believe that failure follows so many because they do not persist in its use for a long time.

LOUISVILLE.

RUPTURE OF THE UTERUS.*

BY NEVIL M. GARRETT, M. D.

On the morning of September 18, 1901, I was called to see a colored woman in labor. She was of heavy build, twenty-seven years of age, and the mother of six children, three of whom are living. Her mother, who was a midwife, said she had been having pains off and on for two or three weeks, but got worse between 2 and 3 o'clock on the 16th, at which time the membranes ruptured. She did not have hard pains at all, and was not confined to bed until the night of her death. She got worse about 3.30 on the night of the 17th, at which time she complained of being sore, but did not complain of much pain. She bled just enough for it to be noticed a short while before she died.

I was the first physician to see her, and when I arrived, about 5 A. M. on the 18th, she looked natural but was moaning, and as she did not reply when spoken to, I suspected hysteria. However, upon feeling for the radial pulse I failed to find it, and gave $\frac{1}{8}$ grain of strychnia hypodermatically. Upon external examination of the abdomen it was found to be large and soft, but the fetus could be felt.

* Read before the Kentucky Midland Society, at Georgetown, Ky., October 10, 1901.

Just as I had washed my hands and gotten ready to make a digital examination the woman died, but I proceeded with the examination and failed to find any part of the fetus presenting. My finger came in contact with something which felt like a placenta, and I thought I had a case of placenta previa. I passed my hand up and brought down one foot, and later got the other. I did not succeed in delivering the child. As the woman was dead I did not like to leave the extremities protruding from the vulva, and also wanted to make a further examination into her condition, so I pushed the child back and found what I probably at first mistook for the placenta to be the uterus, which was well contracted and felt ragged on the lower side of the cervix. The uterus was torn from the posterior vaginal wall, and rested near the anterior abdominal wall. I passed my hand into the abdominal cavity, where I could feel my finger in the abdomen with my free hand on the outside, and could plainly feel the small intestine. The child was loose in the abdominal cavity. I made no particular search for the placenta, but it was not in the uterus, as I explored that.

The time of the occurrence of the rupture is not known, but as the peritoneum was found to be inflamed upon post-mortem examination, it is probable that it had occurred when she is said to have gotten worse, or about thirty-eight hours before, when the membranes are reported to have ruptured.

A post-mortem examination was made on the 19th, at which time the fetus and placenta were removed from the abdominal cavity, whence they had both escaped. The parietal peritoneum was inflamed, and the posterior wall of the cervix was ruptured longitudinally for a short distance. The vagina seemed to have separated from the posterior part of the cervix. The fetus had hydrocephalus to a marked degree, which was the probable cause of rupture, though it may have been due to an abnormal presentation.

FRANKFORT, KY.

BRITISH CONGRESS ON TUBERCULOSIS.

BENJAMIN FLOYD, M. D.

Royal London Ophthalmological Hospital.

There has probably not assembled a more important gathering of medical men, or one in which the general public felt a deeper interest in their deliberations, than the Tubercular Congress that convened recently in London.

The meeting was called to order by the Duke of Cambridge on behalf of His Majesty the King, who has manifested such a great interest in all efforts made toward improving the hygienic condition of the poor and prevention of disease, as far as possible, among his subjects.

Most of the countries of Europe were represented at this congress, and there were several from the United States, among whom may be mentioned Janeway and Osler.

While no one would attempt to estimate the good that such a congress accomplishes, as each suggestion will have to be put to the crucial test, still the congress must result in great good, as it was an occasion for the men that had made a special study of this disease to assemble and discuss tuberculosis in all its phases. Probably Dr. Robert Koch, of Berlin, delivered the most important address; at least, it provoked most discussion, many of the delegates not assenting to the views that he enunciated.

Like all truly great men, Dr. Koch is a man of strong convictions, and when once convinced of a bacteriological fact he does not hesitate to publish it to the world, notwithstanding it is antagonistic to the generally accepted teaching in this special field of investigation. Dr. Koch holds to the opinion that the tubercular bacilli that infect man and cattle are different, notwithstanding in their staining reaction and growth on media they are alike.

This was a statement the delegates were not prepared to accept, as it has been the teaching that they are identically the same. All students of bacteriology are agreed that the tubercular bacillus that infects fowls is different from the mammalian bacillus, but had never thought that there were different kinds of the mammalian tubercular bacilli.

The avian tubercular bacillus grows at a higher temperature on media than the mammalian bacillus, and the nodules they form are

larger and do not suppurate as the mammalian tubercular nodules do. There can be little doubt, since the experiments of Nocard, that these two bacilli belong to the same species, but that this difference has developed by passing through birds, which have a higher temperature than the mammalian family.

As a rule the inoculation of a fowl with the human tubercular bacillus produces no effect, while they are very readily infected when inoculated with the avian bacillus. On the other hand, it is much more difficult to infect animals by inoculating them with the avian bacillus, but it has occasionally been done. It seems that the avian tubercular bacillus sustains about the same relation to the human tubercular bacillus that the spirillum of Metchnikoff does to the spirillum of cholera.

Dr. Koch's experience with the mammalian tubercular bacilli is this: as long as he experimented on rabbits and guinea-pigs he failed to arrive at any satisfactory results than that the human and bovine tubercular bacilli are one and the same; but when he began to experiment on cattle, swine, asses, sheep, and goats the difference was so striking that he considered them different bacilli. Cattle which had stood the tubercular test, and therefore considered free from tuberculosis, were inoculated with pure tubercular sputa taken from human tuberculosis. Some of them got to inhale air infected with this sputa; others were inoculated under the skin, some intra-peritoneally, and others into the jugular vein. Not one of these animals showed a trace of tuberculosis after a few months, when they were killed, and some of them had gained in weight. Only where the injection was made was there a suppurative foci containing a few bacilli.

These results were entirely different when experimenting with the bovine bacillus. The results were the same whether they were inoculated under the skin, intra-peritoneally, or into the vascular system. High fever developed, and the cattle became weak and poor, and some died. Not only was there infection at the point of inoculation, but in the internal organs as well, but notably the lungs and spleen. In other words, the cattle proved just as susceptible to the inoculation with the bovine bacillus as they had proved insusceptible to the human bacillus. Almost as striking results were obtained when he experimented on swine, asses, sheep, and goats.

From these experiments Dr. Koch concluded that the human and bovine tubercular bacilli are not one and the same, notwithstanding

their growth on media and staining reaction are identically the same. But the important question to settle after all is, is man susceptible to bovine bacillus?

Dr. Koch is not so sure of this, as one can not experiment directly on man and see if he is susceptible to inoculation with the bovine bacillus, and all one knows has to be obtained indirectly through mere observation. He thinks it takes place but rarely if ever at all. He reasons thus: If man is infected with the bovine bacillus, as is generally believed, then with the milk and butter that is consumed daily in the large cities that have been shown to contain the living tubercular bacilli, there would be far more cases of infection by this means than is observed. That a case of tuberculosis is due to the taking of food infected can only be assumed, Dr. Koch thinks, when there is primary tuberculosis of the intestines, and this occurs very rarely, and he has seen only two cases.

Dr. Koch suggested that when there was a case of tuberculosis in which there was suspicion that it was infected with the bovine bacillus, you might take some of the tubercular material and inoculate a media, and from this inoculate cattle and see if the cattle will be infected and produce tuberculosis, or whether they will resist the inoculation as they do the human bacillus when inoculated with it.

The only possible error that might arise from this means of inquiry is that possibly, even if it is a bovine bacillus infection, that by passing through the human it has been so modified that it will not infect cattle when inoculated with it, notwithstanding it is a bovine bacillus; just as the avian tubercular bacillus does not, as a rule, produce infection in animals, notwithstanding it is believed that it and the mammalian tubercular bacillus was at one time one and the same bacillus. But this is only a surmise, as we know nothing as to what would be the effect on a bovine bacillus after it had produced infection in man, if it is possible; and the opinion of Dr. Koch, who has probably studied this question more than any one else, will be accepted as correct until it is proven otherwise.

To this opinion of Dr. Koch's, that man was not infected with tuberculosis from taking food infected with tubercular bacilli, a great many of the delegates could not agree, Lord Lister being among the number. Lord Lister, who will be remembered as the father of anti-septic surgery, took issue with Dr. Koch in that he thought you could get tubercular infection from the alimentary canal without the intes-

tines being infected, and asked how was *tabes mesenterica* to be explained, then, when there was no tubercular infection of the intestines, lungs, or anywhere else except the mesenteric glands, if it was not through the alimentary canal?

Nocard pointed out that veterinary surgeons had been infected from a wound received while experimenting on tubercular animals.

All agree with Dr. Koch in that human sputa is the main source of infection, and because a person is coughing up tubercular bacilli it is no reason why he should be considered a source of infection to others if he is able to take care of the sputa and see that it is destroyed before it becomes dry and floats out into the air. This is the condition with persons in the first stage of the disease, as well as those that are further advanced, if they are able to procure proper attention and nursing. But the poor, that are not able to have this attention paid to them, become, then, a potent means of disseminating this disease. All of us can recall entering the homes of consumptives and seeing the family occupying one or two small rooms, and the patient not receiving the attention he needs. Then it is that he becomes a source of infection, and especially at night, when the family are occupying these small rooms, poorly ventilated, and breathing over and over again the air infected by the tubercular patient that is occupying the same room.

The members of these families die off, one by one, from tuberculosis, and, in the minds of the laity, the family inherited it, and nothing that the doctor could do would prevent them from going as they did, when the truth of the matter is that there are very few cases of inherited tuberculosis, and that the members of these families contracted the disease in the usual way. It is this class of cases that Dr. Koch would have sent to the tubercular hospitals or sanatoria, and by thus removing the source of infection, and by educating the people up to the nature of this trouble and the means of preventing it, would stamp out this disease or keep it completely under control, as is done with the other infectious diseases.

For this reason of educating the people as to how to prevent this disease, and by providing for a per cent of her cases of tuberculosis, and her stringent laws in regard to food, England has succeeded in reducing her mortality from tuberculosis 40 per cent lower than that of any other country where it abounds. The mortality from tuberculosis is still appalling, and in inviting this congress to assemble in England King Edward hopes to awaken more interest in this work

than ever before, and thus completely destroy this dreadful malady, if possible, in his United Kingdom.

Dr. Bronardel, of Paris, gave a very interesting address, and insisted that the dwellings should not only be rendered free from bacilli, but that they ought to have plenty of light and air, as these are important factors in developing hale and hearty children. He sounded the note of alarm against alcohol, and declared that alcoholism was the most potent factor in propagating tuberculosis. The strongest man who has once taken to drink is powerless against it. Dr. Bronardel is from Paris, where they drink wine in place of water, and if anybody has a right to speak on this subject, it seems that it ought to be a Frenchman.

He urged that a strict surveillance of the slaughter-house and dairy be maintained, as he was not prepared to accept Dr. Koch's position on the unlikelihood of being infected from the bacilli from cattle, even if it was a different bacillus than the human, which he was not prepared to affirm or deny; thought that steamships should not employ a steward or stewardess that had tuberculosis, and that hotels should have to report all tubercular guests, and the rooms that they occupied ought to be disinfected before allowed to be used again.

In regard to the treatment of tuberculosis by climate, it was shown that different forms of the disease did best, as a rule, in certain kinds of climate, but that no hard and fast rule could be laid down. The warm climate was thought to be most favorable to those that had a great deal of bronchial catarrh and shrunk from the cold, and in this warm climate they would take advantage of the fresh air, while if sent to the mountains they would shrink from the cold and not take advantage of this essential. Laryngeal phthisis, and cases that have only one lung involved, were thought to do well in the warm climate.

Sea voyages were shown to yield some striking results; sometimes when they have been out on a voyage for three months, and then with a month's rest on land, to return, making a stay of about seven months. But the objection that was pointed out to this form of treatment was the vicissitudes of the climate, and that the patient did not have the proper opportunity to take needful exercise. The cases most benefited by sea voyages were those that had large hemorrhages, accompanied with small areas of tuberculization; in phthisis, accompanied with enlarged lymphatic glands; and in cases where the tuberculosis was confined to one lung and in a quiescent state.

There were others that thought the good effect gained from a sea voyage was greatly overestimated, as no one could tell whether the patient was going to enjoy the voyage or lie in his cabin enduring the horrors of seasickness in addition to his invalidism due to tuberculosis. When one reflects upon the sickening scent due to the oil used on the engines, the impure air that we had to breathe during a storm when it was impossible to get out on deck, and all the portholes were closed and the ship swaying to and fro, and most every one you behold has an expression of uneasiness about his stomach, to say nothing of an occasional sea-fog, will make one very slow to prescribe this treatment until you have good reasons to believe that your patient is a good sailor, and that the sea will be smooth and the weather pleasant.

The mountain climate was thought to be contra-indicated in acute tuberculosis, catarrhal tuberculosis, laryngeal tuberculosis, in tuberculosis accompanied by great nervous irritability, and in patients with cavities. It was shown that when a patient went to the mountain climate there was at first a quickening of the respiration and circulation, and a decrease in blood-pressure, and often accompanied by great thirst; that the amount of urea excreted by the kidneys was decreased, while the amount of carbonic acid and water eliminated by the lungs was increased. But after remaining there for some time the normal amount of urea was excreted, the blood-pressure was increased, and the respiration and circulation decreased, and there was an increase in the measurement of the thorax of from one to three inches; and that there was a noticeable increase in the mobility of the thoracic walls, which was, no doubt, due to the greater physiological activity of the lungs and to a local empyema around the tubercular lesions.

As to the medicinal treatment, but little if any thing was added to the list of remedies already known.

Whether a tubercular patient should be allowed to marry or not is a question on which every one has his convictions; but in the light of our present knowledge of the nature of the infection of this disease, most every one will agree that it would be one of the greatest boons we have to rid our country of this dreadful scourge. If not law, then let public sentiment raise its voice against this practice, and maybe sense and not sentiment on the part of the contracting parties will assume its rightful sway, and all tuberculars will be regarded unmarriageable.

LONDON.

**ANALGESIA FROM THE SPINAL SUBARACHNOID INJECTION
OF COCAINE.***

BY J. GARLAND SHERRILL, A. M., M. D.

The ideal anesthetic would be a drug capable of producing unconsciousness, with freedom from pain and loss of reflex muscular contraction, without danger to life or disagreeable and annoying symptoms. Such an agent will scarcely be found, for any drug sufficiently powerful to render a patient even temporarily oblivious to external influences must of necessity be dangerous to life. No one who has used anesthetics frequently will deny their danger, or the frequency with which serious symptoms are observed during their administration. It is owing to the dangers incidental to general anesthesia that a number of different methods have been tried with the view of lessening the chances of fatality. Researches of this character have developed local anesthesia to a remarkable extent, quite a number of drugs having been used for this purpose. Recently the local use of cocaine has been extended to the spinal cord.

Dr. J. Leonard Corning, 1884-1885, was the first to demonstrate the possibility of cocainization of the cord. Prof. Bier, of Kiel, was the first to use the method in a surgical way, while Tuffier, of Paris, has brought the subject prominently before the profession. Murphy, Matas, Fowler, Morton, and others of this country have employed it quite frequently for surgery, and Marx has used it often in labor, giving a flattering report. The number of reported cases is at present quite large, yet insufficient to give an accurate idea of the danger or the value of this method for the relief of operative pain. That analgesia can be produced in this way has been clearly demonstrated. Strictly speaking, cocaine is not anesthetic, as the sense of feeling is not entirely abolished. The questions for the profession yet to determine are the dangers incident to its use, its feasibility, the indications and contra-indications for its employment, the best strength of solution, and the amount to be injected. That cocaine so used will ever displace the general anesthetics I do not believe, yet my limited experience, considered in connection with the

* Abstract of a paper read before the Kentucky State Medical Society, May, 1901.

reports of others, leads me to the conclusion that this method has a considerable field of usefulness. Let us consider the possible dangers from the injection into the spinal canal. First : The shock of tapping the cord and injection of the cocaine. Simple tapping of the spinal subarachnoid space is usually a safe procedure, still Gumprecht (*Deutsch Med. Wochenschrift*, June 14, 1900) has collected seventeen cases from the clinics of Quincke, Furbringer, Lenhartz, Lictheisen, Kronig, Bull, and himself in which death has quickly followed lumbar puncture for diagnostic purposes, in which fatal termination could be attributed to no other cause than this apparently trivial procedure. It must be remembered, however, that these were cases of disease, either of the cord or brain, and in some cases, at least, tumors of the brain were present. It is quite probable, also, that the amount of fluid withdrawn had something to do with these fatalities. Where only a small quantity is withdrawn the shock will be slight. The depression from the injection seems to be proportionate to the dose of cocaine.

Second : The danger to the cord and centers in the medulla. Sicard has demonstrated that the toxicity of the cocaine injection increases as the injection is made higher in the cord. According to Tait, Sicard, and Cagleri, the spinal canal is accessible as high as the sixth cervical space. Depressive action upon the medullary centers is extremely unlikely to occur if the dosage of cocaine is small and the injection made in the lumbar region of the cord, or rather the cauda equina. I have made the injection successfully in the tenth dorsal space of a child of nine. If the patient remains in the sitting posture for one or two minutes after the injection is made, there will be little chance for the upper part of the cord or the medulla to be affected seriously. Nicoletti (see *Therapeutic Gazette*, November 15, 1900), on the basis of an experimental research, maintains that these injections cause no anatomical alterations of the nervous elements. If he is correct, and the effect on peripheral nerves leads us to think that he is, the danger of paralysis and late effect upon the cord is very remote. The danger of hemorrhage into the canal from injury to one of the spinal veins by the needle must be very slight, yet a case is recorded where such an accident has occurred. (Case of Heumberg.)

Third : The action of cocaine upon the heart. Injected into the spinal canal the drug should be no more depressant or dangerous to the heart than a similar dose in another part of the body. A. M. Phelps reports a case of death from the local (not spinal) injection of thirty

minims of 2 per cent solution, and claims to have known two other deaths from the injection of a 10 per cent solution into the gums. Six tenths of one grain may then be assumed to be the smallest fatal dose. The amount of cocaine for safety, therefore, should be limited to three tenths or four tenths of a grain, which amount of an active drug will produce complete analgesia in parts below the diaphragm, or, according to Morton, as high as the face.

Fourth: The immediate danger of meningitis and myelitis from infection through the puncture under proper aseptic precautions should be rendered practically nil. The chief danger lies in the skin of the patient, which can not be rendered absolutely sterile. To avoid infection from this source a small incision is recommended to be made through the skin for the insertion of the needle. This I have found to be unnecessary. When we consider the frequent use of hypodermic medication, and the extreme rarity of resulting infection, it seems reasonable to conclude that thorough cleansing of the skin of the back as for any surgical operation will give a field devoid of danger. Carelessness in the technique may undoubtedly be productive of great harm, and no one should attempt spinal injection who is not familiar with practical asepsis. So far as I can learn, there have been up to this time no reports of infection through the puncture. The annoying and disagreeable symptoms that have been reported are by no means constant or certain. Rapid heart, nausea, vomiting, faintness, dizziness, pallor, sweating, cyanosis, and involuntary evacuations of the rectum have been noted during the analgesia. These symptoms appear with the nausea, and just prior to vomiting, and usually are not sufficient to annoy or cause alarm. Headache more or less persistent has occurred as an after-effect. Nausea appears in about 30 per cent of the eight hundred and three cases in which mention is made of the condition, and usually within fifteen minutes of the injection, but in a few instances it has occurred after the operation is concluded. It is usually slight, not persistent, and infrequently accompanied by vomiting. Headache appears to occur with about the same frequency. This can usually be relieved or prevented by the use of acetanilid, citrate of caffeine, and bicarbonate of sodium. To counteract toxic symptoms, Marx recommends hydro-bromate of hyoscine just after the cocaine is administered, and nitro-glycerine with it or at the onset of nausea. Involuntary evacuations have occurred in only one of my cases, which I attribute to the fact that the rectum and bladder have been emptied prior to operation. In fact, these patients received the same preparation

as for general anesthesia. The possibility of psychic pain will interfere with the efficiency of the method in very nervous individuals. Conversation regarding conditions met during the operation will, of course, be properly prohibited. The ability to converse with the patient will not ordinarily prove of especial value, although Rodman says he was materially assisted by the patient in the manipulation of a leg he operated upon by this method.

After every general anesthesia, especially for the more serious operations, the appearance of the patient is certainly indicative that he has been through a serious ordeal ; moreover, some time must elapse before he regains full control of his faculties. That the shock of the general anesthetic, combined with that of the operation, tends to reduce the resistance of the patient to later dangers, such as sepsis, suppression of urine, bronchitis, pneumonia, etc., I firmly believe. The shock after even major operations done under spinal analgesia is very slight. One who has seen the ghastly and helpless appearance following prolonged anesthesia, and the bright, cheerful expression of the patient who has had the cocaine injection, is impressed by the marked contrast between the two conditions. This method of analgesia can be used in many cases in which a general anesthetic is especially dangerous, such as heart disease, bronchitis, or Bright's disease, with or without dropsy. These conditions, even with our present knowledge, offer a field for the use of cocaine. Old persons will certainly withstand the shock of an operation better under local than general anesthesia, and the interference with glandular activity, so frequent a sequence of general anesthesia, is not present. There is less disturbance of the lungs or heart ; less interference with secretions ; less shock ; patient is conscious, and can give immediate notice of any ill feeling ; after abdominal operations food and drink can be administered early without fear of nausea and vomiting, as the nausea occurs soon after the injection is given, and disappears promptly. A major operation apparently becomes a minor affair when done under cocaine. My experience leads me to favor this over general anesthesia in operations about the rectum and anus. This very sensitive part requires the most profound general narcosis to prevent resistance upon divulsion of the sphincter. I have divulsed under spinal cocainization from twelve drops of a 2 per cent solution, and operated for hemorrhoids and for fistula, without any resistance or complaint of pain upon the part of the patient. In fact, rectal cases have given me a very favorable impression of this method. Future cases may cause me to change my opinion in this

regard, for I use the method tentatively and with great caution. The whole question will depend upon the amount of danger incident to the use of cocaine in this way.

Some objections offered to this method of obtaining analgesia are :

1. The idiosyncrasy which certain individuals have to the drug makes its action variable, and some make the claim that it can not be depended upon. This is to some extent true, but the percentage of failures to reach the canal and to obtain analgesia after making the injection is very small—thirty-seven in fifteen hundred and thirty-four. About one third of these were failures to obtain the fluid.

2. Many claim that the method is far more dangerous than chloroform or ether. At first mention of the trial of such measure the profession was naturally impressed by the great possibility of harm, but as case after case is reported, we find the danger to be far less than was anticipated. One peculiar feature is that those writers who have little or no experience with the method are the ones who make the greatest outcry about its danger. I have collected over fifteen hundred cases, the greater number performed in this country, without a death that can be directly attributed to the injection into the cord. The case occurring in the experience of Tuffier would never have been attributed to the anesthetic had the operation been performed under general anesthesia. It occurred twenty-four hours after the anesthetic, and the lesions shown in the heart and lungs were such that one need look no further for the cause of death. Murphy says (*Journal American Medical Association*, February 9, 1901): "A close analysis of the details shows there is ground for believing that the drug was in no way responsible for the fatality."

P. Reclus states that spinal cocainization now has a record of six deaths in Europe. Gorlav and Jonnesco, of Bucharest, have each reported a fatality. In the former case 1.5 cg. of cocaine was injected and a leg amputated. Two hours later the temperature rose to 38° and 40° C.; pulse 125, and death occurred in twenty hours. Juillard has reported a death the second day after an operation for hydrocele and inguinal hernia. The autopsy showed a ruptured aneurism of the sylvian artery. The vaso-constriction excited by the cocaine may have been a factor in the premature rupture of the aneurism. Even in Tuffier's case, in which a mitral lesion and acute edema of the lung have been assigned as a cause of death, Reclus queries whether the action of the cocaine may not have been a factor in the evolution of the edema.

Heumberg has also reported the death of a man of thirty years, fifteen days after an operation under spinal cocainization. The autopsy disclosed a hemorrhage into the cauda equina. In Dumont's case a febrile, tuberculous lad, in bad general condition, died two days after spinal cocainization, and no direct cause for the death could be discovered at the autopsy unless it was the cocaine. "This total of six deaths to less than two thousand applications of spinal cocainization is not an encouraging record," he remarked in the conclusion of his address to the Paris Academie de Medicine, March 19, 1901. (From Journal A. M. A., April 19, 1901.)

When we notice the first two cases, in only one is any statement made of the condition of the patient prior to death, and in that one (Gorlav) the cause of death is, to say the least, not clear. To place a rupture of a sylvian aneurism on the day after the operation to the credit of the cocaine is beyond reason, for the effects of the drug are very transitory, and the operation itself, with its excitement, would be more likely to hasten rupture than would the cocaine. Death in a case like that of Tuffier's under other circumstances would be considered explained by the changes present. The case of Dumont's, also, certainly should not be attributed to the cocaine two days after its use because no other cause could be determined by autopsy. Cases may die from exhaustion and anemia after operations as well as from sepsis. So that as a proven fact, of these cases only that of Heumberg should be accepted as due to the injection of cocaine. Folet reports in the *Echo Medical* of March 31st (Journal A. M. A., April 20, 1901) another death in progressive collapse five days after spinal cocainization. No analgesia was induced, and the operation was postponed for two days and performed under chloroform. The patient was a man of fifty, in satisfactory condition. Why should the cocaine be charged with a death five days later, and three days subsequent to the use of chloroform? Too many conditions can contribute to the causation of death for a case such as this to be accepted as a death from cocaine without further data.

M. Racoviceanu-Pitesci, of Bucharest, states that he heard of two deaths in Roumania (probably those of Gorlav and Jonnesco), but they were not among his cases, and no details are given, so we omit them for want of the facts. It appears to me unfair to place these deaths in my report, as the total number of cases among which they occurred is not given, and although I have made repeated efforts to obtain more complete European reports, I have so far failed. A full, close study of the

reported fatalities would be interesting. The American reports show no fatalities due to the injection into the spinal canal, and from the reports at hand it appears to be a quite safe means for the relief of operative pains.

The ages in which it has been used varies from two and a half (Bainbridge) to eighty-four (Weber). In children the fear of pain will prevent its frequent use. Old persons seem to stand the operation under it very well indeed. The scope of the operative analgesia is usually considered to be below the diaphragm, but Morton, of San Francisco, writes me of a case in which he removed a two-pound tumor from the face without pain. He claims that the rapid instillation increases the area of analgesia without an increase of depression. Marx, on the other hand, inclines to the view that rapidity of injection has no effect upon the extent of the analgesia.

The time length of analgesia varies, but usually lasts an hour or more. Dr. Goldan performed several different operations upon a patient which required one hour and fifty-five minutes, using one injection, and the patient only noticed pain at the end of this time. Marx, Bainbridge, and others have not hesitated to use more than one injection if needed to carry out the indicated procedures. Some minutes should be allowed to elapse between the instillations for fear of an overdose. The technique of the injection has been so frequently published that I shall only briefly state the steps. The cocaine must be sterile.⁴ This can be accomplished by the fractional method (80° to 30° repeated several times), or it can be shaken in ether and then dissolved in sterile (boiled) water. (Bainbridge). A number of operators depend upon the sealed sterilized tubes with perfect success. Tuffier, in an article in *La Presse Medicale*, No. 15, February 20, 1901, describes three methods for sterilization. The first is heating to 120° C. in a sealed vessel in oil. This method, he claims, does not decompose the drug. It appears that by heating in this way under pressure the water of crystallization is retained and decomposition does not occur. The second is the method of fractional sterilization mentioned above, and the third is filtration through a porcelain (Chamberlain) filter, the first portion which passes through being thrown away. He shows a small apparatus devised for him by Roux. Every vessel and all water used in the preparation must be sterilized by heat. No bicarbonate of sodium should be used in sterilization, as that decomposes the cocaine. (Bier claims to have developed a perfectly safe technique which has not yet been published.)

The solution should be fresh, yet it seems to keep indefinitely in the sealed tubes. A two-per-cent solution seems to be uniformly the most satisfactory, and the dosage should be limited to 25 minims as the maximum, from 15 to 20 being best. The dosage should be reduced for children according to age. A small amount of morphia may be incorporated with the cocaine (Matas). A platinum needle of small caliber, about three inches long, and with a short bevel to prevent leaking at the point of puncture, is preferable. A similar steel needle may be used if proper care is taken to prevent rusting. Sterilize by boiling. The syringe used by Marx is a solid barreled metal one. Others use a glass syringe without any metal attachment, the piston being covered with asbestos or rubber. Either of these can be boiled. The greatest care should be given to the sterilization of the patient's back. Shave when necessary, then scrub thoroughly with soap and water, then with alcohol, and finally wash with a solution of bichloride of mercury 1-500. The guide to the puncture is the fourth lumbar spine, which lies on a level with top of the iliac crests. The puncture is usually made in the space between third and fourth or fourth and fifth lumbar spines while the patient bends the spine strongly forward, scorching position (Marx).

I have never found it necessary to use the ethyl chloride spray to anesthetize the point of puncture, having found that simply informing the patient that he will feel the needle and must not move is sufficient. The point should enter a very little to the right and below the spine selected, and should be directed forward and very slightly inward and upward. If a bone is impinged upon, the needle should be partly withdrawn and pushed forward in a new direction. The ligaments of the vertebræ offer a slight obstruction to the needle, so that a sense of diminished resistance is felt when the canal is reached, and almost instantly the clear fluid will flow drop by drop. If it does not appear, have the patient cough; if no result, suction on the needle with the syringe will usually start it. When the fluid is obtained and only then is it wise to make the injection. The amount of fluid allowed to escape should approximate the quantity to be injected. The fluid is instilled slowly, although some operators thrust it in rapidly to get a greater area of analgesia. The point of puncture is to be protected by collodion on sterile cotton or by a gauze pad. The patient remains sitting for a minute or so, then assumes the recumbent position. If his condition is such that recumbency is enforced, the injection is made with the patient

on his side, supported by a pillow. After the operation, rest in recumbency should be enforced. The patient should have the same preparation prior to operation as is usual for general anesthesia. A number of substitutes have been proposed for cocaine, such as antipyrine, eucaine, and tropacocaine. None of these seem to act as well as cocaine. The most favorable report comes from Dr. Karl Schwartz, of Agram, who has used tropacocaine in sixteen cases. Dr. Wiley Meyer, in *Medical News* of April 13, 1901, after an experience of four cases in which this method was used, says that the following points of importance in comparison to cocaine were found:

1. That tropacocaine is less than half as toxic as cocaine.
2. The depressing action both on cardiac motor ganglia and cardiac muscle, particularly the latter, is much greater with cocaine.
3. Recovery from its effects is much more rapid.
4. The solution is by far more stable than cocaine hydrochlorate.

M. Tuffier, *Presse Medicale*, April 24th (letter to *Journal A. M. A.*, May 18, 1901), states that he has tried tropacocaine as proposed by Schwartz and found it too weak. Fritz Engelman, in writing of eucaine, says that he had the unpleasant effects without the anesthesia of cocaine, and therefore considers that we will not find a substitute in eucaine. Others have arrived at similar conclusions, although Keen's case shows that it may be analgesic.

My personal experience embraces twenty-seven cases, in one of which, a woman of three hundred pounds, I failed to obtain the cerebro-spinal fluid, although the diminished resistance usually noticed was felt. In another the patient insisted upon being put to sleep, so required one and a half drams of chloroform to quiet her. She said afterward that she did not suffer any pain, but wanted chloroform because she was afraid she might be hurt. The others gave the usual phenomena noted, two having nervous rigors. One of these at a second operation by the same method had no nervous phenomena at all. Several went through the operation without pain or discomfort of any kind, notably a man of sixty-seven, amputation at the knee for diabetic gangrene. This patient died on the fourteenth day of sepsis, the stump being infected. His temperature was 102° at time of operation. An examination of his cord, cauda equina, at point of puncture showed no pathological change either macroscopically or microscopically, showing that there is no bad effect upon the cord.

The conclusions at which I have arrived from a close study of the situation are that cocaine analgesia will not likely prove satisfactory in

operations above the level of the diaphragm ; that it will perhaps not be much used in abdominal cases which are not clear and are likely to prove tedious or difficult ; that its special field will be found in operations upon the lower extremity, including amputations and resections, and those of perineum, bladder, and rectum ; also that it is at least useful in old persons and those who are suffering from diseases of the heart, lungs, or kidneys, from cirrhosis of the liver, and from abdominal dropsy ; that it can be successfully employed where a patient fears general anesthesia, and we certainly throw aside a valuable addition to our armamentarium if we neglect to use this method in the proper cases.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, September 20, 1901, the President, T. L. Butler, M. D., in the Chair.

Primary Tuberculosis of the Liver with Specimen. Dr. Louis Frank: Four or five months ago I saw with a physician in this city a patient who gave about the following history: A man, aged forty-six years, who had lived here most of his life, moved to New Orleans four or five years ago. While there he became ill with diarrhea, or at least what was diagnosed as dysentery. He was in bed two or three months, and was quite ill. He returned to Louisville eighteen months ago, and again engaged in business here.

About ten months before I saw him he again began to be ill, complaining of a great deal of pain in his abdomen, especially over the liver, also in the right and left hypochondrium and epigastric region. He was treated by several physicians, always for malarial fever. He was kept on quinine for a number of months, having fever every day, going sometimes, I believe, to 103° or 104° F. He also had chills at various times.

When seen by Dr. Florence Brandeis, with whom I saw him, he gave this history, and presented at that time an enlargement of the left lobe of the liver reaching over to the median line and probably two or three finger breadths below the border of the ribs. The right lobe of

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

the liver was also enlarged, and extended down probably two inches below the free costal margin. Dr. Brandeis kept him under observation for three or four weeks, thinking that he possibly had an abscess of the liver. Dr. Marvin saw him in consultation, and did not believe there was an abscess of the liver. The blood was examined, no malarial organisms being found, nor was there any marked change in the blood noted at the time I saw him. He had later, beginning probably a week or two before I saw him, nightsweats. These recurred regularly every night, and were very profuse.

Upon examination he presented the enlargement of the liver of which I have spoken, the left lobe being enlarged more than the right, extending beyond the median line, even lower than the right lobe. I thought from the symptoms that he might have some suppuration, probably about the region of the gall-bladder, and that peritonitis and consequent adhesions had dragged the left lobe of the liver down, and that it was possibly a displacement more than a true enlargement.

He was sent to the infirmary and kept under observation there for about a week, his urine and blood being examined repeatedly. We thought at that time, on account of the presence of some ascites, that it might be a case of tubercular peritonitis, and advised an exploratory incision, which was made four or five months ago, some time during the month of May.

The abdomen was opened over the region of the gall-bladder, and the right lobe of the liver presented. There were found numerous adhesions between the liver and the abdominal wall and also the diaphragm. These adhesions were extensive. The stomach had been pushed downward out of place, but was perfectly free of adhesions, and there were likewise no adhesions about the intestines anywhere nor about the omentum. The gall-bladder presented; it was largely distended, but normal in color, and no stones were felt therein. Posterior to the foramen of Winslow, in the folds of the peritoneum, could be felt some enlarged glands. There were no other enlarged glands noted. The liver itself was somewhat mottled, and presented what seemed to be some tubercles upon its free surface, and numerous miliary tubercles or nodules about the lower margin. There was, about midway between the lower margin and the upper border, a cyst containing one and a half drams of clear fluid. This cyst was evacuated.

In view of the conditions presented we came to the conclusion that it was a case of tuberculosis of liver, probably primary, recognizing, however, the fact that these conditions are extremely rare.

The abdomen was closed, and the man made an uninterrupted recovery; his temperature came down within two days to normal; he gained in flesh, and did beautifully for a month after the operation.

About the first of July he again began to show some elevation of temperature, his abdomen also began to become distended and swollen, presenting again some ascites, his feet began to swell, nightsweats returned, and he went on from bad to worse and died yesterday.

An autopsy was made yesterday evening. We found the liver decidedly enlarged, being sixteen inches in its transverse diameter and twelve inches in its longitudinal diameter. The thickness we did not measure. The left lobe was almost if not fully as large as the right. The spleen as well as the liver was very much congested and enlarged, being three or four times the normal size. This had been made out before death, the spleen extending below the liver, down almost into the left iliac fossa.

The liver presented distinct tubercular nodules, and I brought a specimen here to show the nodulations, which are undoubtedly tubercular in character. As I cut through the sections of liver presented the tubercular nodules may be seen, some of which have undergone caseation. Some of the nodules are very large. The spleen also presented the same condition. All the organs were found intensely congested. The kidneys showed nothing characteristic. There were a few enlarged mesenteric glands. The mesentery presented a most beautiful example, not only in its tuberculous infiltration and tubercular nodules, but also the coloring of the injected vessels. The omentum was comparatively clear, as was also the parietal peritoneum. We removed a small section of the omentum and also of the parietal peritoneum at the time of the operation, for microscopical examination, but found no tubercle bacilli or nodules, nor were any tubercle bacilli found in the fluid evacuated from the cyst mentioned.

Whether or not this is a case of primary tuberculosis of the liver it is hard to say positively, but the clinical history and all the facts in connection with the case make this diagnosis the most probable one. The liver was certainly more markedly affected than any of the other organs, unless it be the mesentery; but the infection of the mesentery, I am certain, was secondary, as it presented none of the characteristic signs of tuberculosis at the time of the operation, and it was carefully examined at that time.

I can find no mention of tuberculosis of the liver in the literature,

except as occurring secondarily in the form of single nodules which break down and suppurate, forming abscesses; or there may be several nodules occurring as a secondary process to tuberculosis elsewhere, or with the ordinary miliary tuberculosis. I hardly think this is a case of miliary tuberculosis, as the nodules are much larger than we find in this condition. The authorities, so far as I have been able to consult them in regard to the pathology, state that this condition is always secondary to primary tuberculosis somewhere else. In this case there was no evidence of tuberculosis of the kidney or spleen at the time of the operation; there were no enlarged glands anywhere except those of the peritoneal fold of the foramen of Winslow; there was no evidence of pulmonary or meningeal tuberculosis; the lungs were clear.

I look upon this as a very rare case. Shortly before death the patient had several small hemorrhagic stools; the fecal matter was slightly streaked with blood, and he suffered pain in the abdomen constantly. This was perhaps due to the intestines becoming distended. There were no adhesions of the intestines except about the caput coli; the appendix was carried down and adherent at a point near the brim of the pelvis. There was no evidence of peritonitis anywhere except about the liver. The entire liver at the post-mortem was found densely and firmly adherent from the margin of the ribs, which we had made out at the operation; there were no adhesions below where the peritoneum left the ribs, but above this the liver was densely adherent at the time of the operation, and so it was found at the post-mortem. There was no pus found anywhere, except the little caseous nodules, such as I have shown you, in the liver.

Discussion. Dr. F. C. Wilson: It is not often we meet with primary tuberculous deposits in the liver; generally these cases are secondary to tuberculous development elsewhere. Another interesting point is the apparent betterment of this case upon opening the abdomen and exposure of the tissues to the air. We all know that in cases of tubercular peritonitis the results from opening the abdomen are sometimes almost remarkable. Some cases are cured simply by a laparotomy. I can recall one case where suppuration resulted in an abscess opening near the umbilicus, and a cure resulted possibly from exposure and admission of air into the peritoneal cavity. I noticed in the history of the case reported that there was improvement or cessation of active progress of the disease brought about by opening the abdomen—the exploratory incision that was made.

Dr. A. M. Cartledge: Primary tuberculosis of the liver is certainly a very rare disease. The cases we see showing extensive tubercular deposits about the surface of the liver, peritoneum, etc., usually begin elsewhere, most frequently about the tubes in young women and about the caput coli in men, from intestinal tuberculosis. The case reported seems to me very mysterious; for instance, the high temperature. There did not seem to be any evidence of suppurative inflammation, secondary infection, or pus formed anywhere. We see here evidences of quite extensive tubercular processes going on in the center of the liver, some of the nodules having progressed to the stage of caseation, and I am at a loss to understand the symptomatology. Without mixed infection I can scarcely see how even extensive tuberculosis of the liver should have so interfered with the nutrition and function of the organ as to lead to death of the patient in this length of time without other involvement. The case looks like one of primary tuberculosis of the liver. The clinical course of the case, producing death by continuous fever and exhaustion, without liquefaction and secondary infection, and the great rarity of central tuberculosis of the liver, primary, make it an extremely interesting case.

Dr. B. C. Frazier: While it is a fact that all authorities state that primary tuberculosis of the liver is extremely rare, still I do not understand why it should not be just as easy to have tuberculosis of the liver as of other remote or isolated parts of the body, such as the hip, knee, etc., without having secondary changes. It is possible that this man had primary tuberculosis somewhere else, but if so it was not discovered, just as it is not discovered, for instance, in tuberculosis of the extremities. I remember having seen one case that I think was primary tuberculosis of the liver; there was no other evidence; the patient had an abscess of the liver which I believe was tuberculous in character.

Dr. C. Skinner: The case reported by Dr. Frank recalls to my mind one I saw with Dr. George Simpson several years ago, a girl about nineteen years of age. He had been treating her for some time; she had continued fever, no chills, but had nightsweats; menstruation had ceased, and she had been under his care for several months. I saw her and made the diagnosis of tuberculosis. That diagnosis was contradicted by one or two others who saw the patient, they claiming that the trouble was tubal suppuration. She was operated upon and typical tuberculosis of the cecum found, the disease involving about two thirds

of the ascending colon. The ovaries, uterus, and lungs were free from tubercular involvement. The operation was of no benefit, and the patient died from exhaustion.

When we study the ways in which tuberculosis is transmitted—through the lymphatics being one way, direct continuity of tissue another, through the blood-current another—it seems to me this is one of those rarer forms of the disease produced by migration or extension of the trouble through the blood-current. The liver takes all the blood in the body through its circulation in a short time, and so does the spleen; these are two great blood-making or blood-controlling organs of the body. It strikes me that the infection in this case must have been introduced when the man had his first attack of dysentery. In the second attack the liver becomes involved, going on to pain, and interfering so much with the functions of the liver and spleen that the man died of exhaustion. To me this explains the condition which produced the fever without pus. Most of our cases of fever are due to absorption of toxines, mixed infections, etc. This was rather a disintegration of the blood by the involvement of these important organs, the blood-making function.

The doctor states that there was a great deal of pain complained of during the progress of the disease. This, more than likely, was intestinal, due to accumulation of gas. In disorders of the liver we frequently have great intestinal distension; intestinal digestion is interfered with; fermentation produces the gas.

Dr. Louis Frank: At the autopsy only a small portion of the intestine was critically examined, but the mucous membrane was carefully inspected, and there was no thickening anywhere. Most of the nodules about the neighborhood were in the mesenteric border; very few nodules were noticed anywhere in the convex border of the mesentery; most of the miliary tubercles were in the mesentery. I never saw such a typical picture of miliary tuberculosis of the mesentery; the mesenteric glands were decidedly enlarged.

There are several interesting features about this case. The very fact of primary infection of the liver itself was, of course, exceedingly interesting. If this was primary in the liver, it is probable that infection occurred through the blood-current, through some intestinal ulceration from his bowel trouble.

With the history detailed, the high temperature, nightsweats; with the enlargement, which was rather upon the left side primarily, while

we recognized that abscess of the left lobe of the liver is exceedingly rare, still we rather expected there might be an abscess in this situation. Then carefully studying the case afterward, the greatest amount of pain being over the gall-bladder, knowing the tendency of the gall-bladder to suppurate and form adhesions, disregarding for a moment the night sweats, etc., we were inclined to believe there might be supuration about the gall-bladder, with probable rupture at that point. The only thing pointing to tuberculosis was the general distension of the belly and the presence of fluid in the cavity, which I could not account for in any other way. On the other hand, as bearing upon the gall-bladder aspect of the case, this man always presented more or less marked jaundice, which I think now was due to the extensive amount of interstitial hepatitis which occurred with this condition, obstruction of the bile ducts being due to pressure within the liver itself, rather than from any trouble with the bile-ducts themselves.

The carrying of the tubercle bacillus through the blood-current is not such an improbable thing, nor is the localization of these organisms in the liver so improbable if we bear in mind the experiments that have been made with introducing coloring matters into the circulation. We know that these coloring matters, when introduced into the circulation, become located in the spleen, in the bone marrow, bile-ducts, and liver before they can be detected anywhere else.

I am inclined, in view of all the facts, to look upon this case as one of primary tuberculosis of the liver, the infection being carried there through the blood-current. I am certain there was no infection of the general peritoneal cavity at the time the operation was performed; the entire force of the process seemed to be expended upon the liver. I introduced my entire hand into the abdominal cavity, and the various organs were drawn up into my incision and carefully inspected, no other focus of infection being found. The kidneys were unaffected, and the spleen was not enlarged at that time.

At the autopsy all the abdominal viscera were very much enlarged and congested; the kidneys showed marked enlargement of the cortex and compression of the pyramids themselves.

The paper of the evening, "The Uses and Abuses of Arsenic," was read by Frank C. Simpson, M. D. [See page 281.]

Discussion. Dr. Louis Frank: At the present time I do not use much arsenic, but when I saw more cases in general practice than I do

now, I saw a few cases of chorea in which arsenic was used. I believe the efficacy of arsenic is very largely overestimated as a specific for chorea. My experience was that putting these patients in bed and keeping them quiet, then giving them a tonic—iron or almost any thing else—would be of more benefit than the administration of arsenic and allowing the patients to go about. I remember one boy who had chorea to whom I gave arsenic for two or three weeks without any improvement; he was then put in bed and kept absolutely quiet for a couple of weeks. Improvement was rapid, and, under tonics, he went on to a perfect recovery. In this one disease any other tonic will answer the purpose just as well as arsenic, if the patient is put to bed and absolute quiet and rest enforced.

Dr. J. M. Ray: My experience has been similar to that just related. I often see cases of so-called facial spasm, mimic spasm, blinking of the eyelids, twitching of the corners of the mouth, muscles of the neck, etc., in children. In the last six months I have seen a number in boys between six and fifteen years of age. They have been brought to me with the idea that there was some throat or eye trouble that was a factor in the spasmodic condition. In several of them I examined the eyes, finding little or nothing wrong; probably some little local irritation. Early in my professional career I had been taught that all these were cases of chorea, and that Fowler's solution was a specific in this disease; and I have almost universally recommended a course of Fowler's solution, and I have not seen a great deal of immediate benefit from its use. They get well, but as to whether Fowler's solution or time does the work I am in doubt. One case in particular I have in mind that has been seen by others of this Society, all of whom recommended Fowler's solution, yet the boy still has facial spasms which are a source of mortification to his parents and himself. His eyes have been carefully examined and little or no defect found.

There is one preparation of arsenic which Dr. Simpson did not mention in which I have a great deal of confidence, especially in certain cases of late specific disease and as an alternative, namely, Donovan's solution. I have found it about as good a preparation of arsenic as there is.

Dr. B. C. Frazier: I think the whole secret in regard to the administration of arsenic is to give an amount sufficient to get the therapeutic effect of the drug. Those persons who work in the arsenic fields are long lived; they have great power of endurance, and people who

become addicted to the use of arsenic—those who have the arsenic habit—seem to live a long time and do well in spite of the fact that we are taught that arsenic in long-continued large doses is an irritant to the stomach and to the kidneys. These people become tolerant to the drug just as people do to any other drug; it produces strength, great power of endurance, great power of breathing, great power to go a long time and endure a great deal. I happen never to have seen any of these persons, but there have recently been written a number of interesting articles on the subject, published in both medical and lay press.

Dr. C. Skinner: One reason we do not get good results from arsenic is that we do not give it for a sufficient length of time. Three weeks is too short a time to tell much about what arsenic is going to do. Three months would be better. If necessary to quiet the fears of the family, the drug may be discontinued for a week and then resumed; but we can get no effect from arsenic in two or three weeks in any kind of a case. I give it in increasing doses until I get the constitutional effects, and it is wonderful how tolerant patients become to the drug. You will remember Mr. McC., the young athlete, who died about two years ago. When he was ten years of age I boarded in the house with his people; at that time he was in bad health, having a chill every day; he became sallow and looked ill. I was asked to see him, and put him upon arsenic in gradually increasing doses. When the dose reached thirty drops three times a day he began to improve; he had no more chills, and eventually became perfectly well. Arsenic certainly has a good effect in malaria, and I give it for its effects.

Dr. F. C. Wilson: I have used arsenic a great deal as a general tonic, also as an antiperiodic and in various diseases, and have gotten good results from its administration. In chorea the dose has to be increased to the point of tolerance. I have given as high as fifty-six drops at a dose three times a day for several weeks to a child twelve or thirteen years of age, resulting in a cure of the disease. I have always, however, watched the effect of the drug very closely, especially its effect upon the kidneys. I have seen some very unpleasant results from the too prolonged administration of this drug. I recall a case that came to me at one time suffering from general dropsy, which was apparently attributable to the prolonged use of arsenic, given by a physician in the country without caution as to the length of time for which it should be taken. This patient moved to the city and continued the medicine that had been given by her physician in the country, and only when

she noticed this general swelling did she consult medical advice in the city, and fell into my hands in this way. The general dropsy was apparently attributable to the prolonged use of arsenic from its action upon the kidneys. The patient finally got well, but it was a very obstinate case to deal with. I always try to avoid unpleasant results of this kind by exercising proper care in the administration of the drug and closely watching its effects. Arsenic is a valuable remedy in skin diseases, nervous diseases, as a general tonic, and especially in certain forms of chronic disease.

Dr. A. M. Cartledge: I am probably something of a crank on the subject of arsenic. It is a well-known fact that many members of the profession, after they practice for a time, gradually begin to lose their faith in the potency of drugs, and continue as they grow older in practice to contract the list of therapeutic agents. If we sift things down to the bottom, we find there are very few things that we really know any thing about, and realize that we can not hope to benefit our patients in a great many instances by the administration of drugs.

In regard to the question of arsenic, I am probably too much of an enthusiast to rationally discuss the matter as it demands. I think arsenic is the most wonderful drug in the entire pharmacopeia. You can not find anywhere in the literature of the subject record of any experiment that has determined its real action. In our medical training we were taught to classify it among the alteratives, one of the drugs which produced some change in the metabolism which we were not able to fully understand or appreciate. If there is such a drug as an alterative in the materia medica, arsenic should take first place. With two or three exceptions it is about the only drug I use. I get more benefit from the use of arsenic than all the other therapeutic agents combined. I do not believe, if you will pardon the statement, that one physician in a hundred knows any thing about how to give it. As soon as the eyelids become puffed, the classical symptom that enough has been given, I think the patient is already in a state of toxemia. The drug should be continued for months if you want to get good results, and it is the rarest thing in the world that I give more than four drops at a dose of Fowler's solution. I never push it until there is puffiness about the eyelids, gastric pain, etc. Pushing arsenic until the lids are puffed is equal to giving mercury until the gums are touched, neither of which should be done. In anemia there is no remedy to compare with arsenic. If physicians will use arsenic in

small doses, long continued, whether the microscopic blood-count will bear out this statement in a scientific way or not, the clinical evidences all point to the fact that it is a better builder up of red blood corpuscles than iron or any other agent that we possess. It changes the color, it gives strength, it gives appetite; how these results are brought about I do not know. We do know that arsenic does not form any appreciable per cent of the composition of blood-tissue—for the blood is a tissue—like iron does; but my own belief is that arsenic acts very much deeper than this; it gives a greater oxygen-carrying power to the red blood cells than any other drug does. Therefore it is the best drug we have in the treatment of all anemic conditions, and in chlorotic females it is better than iron. In chlorosis, for instance, where there is a strong nervous element, the action of arsenic is sometimes marvelous. In local congestions of any part of the system nothing can be compared to the action of arsenic. Take a man with a hypersensitive, congested prostate gland, arsenic is indicated. I knew a prominent gentleman at one time who had been treated two years, a very intelligent man, who was growing rapidly into a sexual pervert as a result of deep irritation of the prostatic urethra. He was treated by means of sounds, applications, massage, etc., and I think the greater number of physicians to whom he applied for treatment thought he was a crank and was becoming crazy. After nearly three years' suffering that man was completely cured by the administration of nothing but arsenic. A local congestion, at this one point, was relieved by this agent alone. This is but a single illustration; the same thing applies to the various forms of neuralgia; arsenic will relieve many of these cases after every thing else has failed. It is unnecessary to call attention to the importance of giving arsenic in malaria. The most extensive researches were made several years ago by the President of the Italian Board of Health in regard to the malaria of the Italian valleys, probably the most severe type of the disease known, and after experimenting with various agents, his conclusion was that in connection with quinine there was nothing equal to arsenic. He stated that after long-continued malaria, where the blood is thoroughly charged with the malarial poison, there is nothing better than arsenic and lemons combined. In chronic forms of malaria, where the blood has been impoverished from the malarial poison, arsenic and lemons are the only reliable agents.

In regard to chorea: It is probable that better effect would be noted

if arsenic were continued for a longer time. I have treated some cases of chorea successfully with this drug, and some were not successful. I remember two cases in one family which were cured by this drug alone.

As a general tonic, in cases of disturbed or perverted circulation in any part of the body, even in those cases where we have no knowledge as to what the pathological lesion is, it is sometimes wonderful what this drug will do, but it should never be given in sufficient dosage to produce the toxic symptoms, such as puffing of the lids, etc.

Dr. J. E. Hays: I think I read a paper before this Society at one time on the use of arsenic in skin diseases. I found that benefit was only to be obtained in certain forms of skin affections, notably psoriasis, as mentioned by Dr. Simpson in his paper. I have also had good results from the use of arsenic in pemphigus. With these two exceptions, I have derived no benefit from its use in skin affections. I give it in the form of the iodide in tablet triturate, usually commencing with one-hundredth grain, going up to one twenty-fifth of a grain at a dose. I never give it until the characteristic symptoms occur from large doses, such as puffiness of the eyelids, intestinal irritation, etc. I think arsenic is a very much overestimated remedy in the treatment of skin diseases; it is a much better nerve remedy than a skin remedy. I have found the best results to be obtained from its use in chorea; I usually administer no other remedy in this disease. Of course there are other factors to be taken into consideration in this disease, such as rest and quiet, which are of much importance. Better results are obtained from the persistent administration of small doses than larger doses given for a shorter time. Arsenic will effect a cure in most cases of chorea if persisted in for a sufficient length of time. My experience with arsenic in skin diseases has been rather limited within the last few years. I remember in the earlier days of my practice I gave it largely in the treatment of the eczemas, but never noticed any decided benefit from its use. Now I only employ it in the treatment of psoriasis and pemphigus.

Dr. F. C. Simpson: Dr. Cartledge has voiced about what I had intended saying in my closing remarks about the use of arsenic. There is no question that many physicians do not use it in the proper way. They go on giving it in increasing doses when it is not demanded, and they soon get puffiness of the eyelids and gastric symptoms. In some cases it is impossible to give six or eight drops of

arsenic at a dose without producing gastric disturbances, and its use has to be discontinued. It should be given in small doses, three or four drops, and continued for a long time.

My experience with arsenic in the treatment of chorea is not like that of Dr. Frank. Recently I have treated three cases of chorea, giving them nothing but arsenic; they were not put to bed; they were allowed to go about as usual, and all of them have gotten well. In one case marked improvement was noted in a week, all jerking ceased, etc., but, of course, arsenic will be continued until all symptoms disappear. The other two patients recovered within one month. Perhaps if I had put these patients in bed they would have gotten well quicker. I treated a good many cases of chorea in the Masonic Home a few years ago; arsenic was used exclusively, and they all recovered. I believe the action of arsenic is to stop the destruction of the red blood cells. It is certainly a most valuable tonic, and if there is a true alternative, arsenic stands at the head.

Malaria following Labor. Dr. B. C. Frazier: On the 11th of September I delivered a lady of her fourth baby; she is a well, strong, healthy woman in every respect, and has never been sick a day in her life. She had practically a normal labor, except that the after-pains were more severe and more continued than I have before seen, otherwise there was nothing unusual or extraordinary about the case.

Night before last, her husband being away attending the funeral of the President, she was very nervous and slept poorly; yesterday she had a little fever, her temperature reaching 100° F. during the day. This morning I was called to see her, and found her temperature 99½° F. I gave her a purge with calomel and fifteen grains of quinine during the day. To-night I found her with a temperature of 100½° F., pulse 84. She has no pain, feels perfectly comfortable, her skin is moist, and she has been perspiring all the time. She told me to-day that this was nothing unusual; that during the entire summer and fall, even during moderate weather, she had perspired freely. Her appetite has been perfectly good, and is now; there are no symptoms except the elevation of temperature mentioned. There is no tenderness over the abdomen, no distension, no soreness of the breasts, and no indication of caking about the breasts. Her tongue is fairly clean. After an enema she passed a few little clots, perhaps three or four, not larger than the end of my finger.

If any of the members present can suggest any thing in regard to the case, I shall be obliged.

Discussion. Dr. C. Skinner: I think this is nothing more than a mild case of malaria, such as often occurs after surgical operations. The doctor has given the patient a purge and administered quinine, so I see nothing else to be done. There is nothing more to fear.

Tachycardia. Dr. F. C. Simpson: Last Friday afternoon a young man from Elkton, Ky., came into my office and said he was feeling very badly; he had a severe headache, and looked rather pale. I took his temperature and found that he had a little fever, but the principal thing complained of was severe headache. He said coming up on the train that day he thought he had a chill. His tongue did not indicate malaria, and a close questioning did not bring out any thing of significance. I prescribed three grains of phenacetin, with a grain each of monobromate of camphor and caffeine, in capsules, directing that he take one every four hours, and come back to see me the following morning. The next morning he came into the office and said that he felt very well; had no headache. I looked at his tongue, then took hold of his wrist, but found that he practically had no pulse. I could simply feel a quiver. I examined his heart, but it was impossible to count its beats. I told him he had better go home and lie down.

I never saw such a marked attack of tachycardia with so little disturbance otherwise. While he was in the office I gave him an hypodermic injection of strychnine, and also gave him some strychnine to be taken internally.

He came to the office the next day, and his pulse had come down to 78. I do not know to what cause to attribute this severe attack of tachycardia; I could not trace any connection between it and any other feature of the case.

B. C. FRAZIER, M. D., *Secretary.*

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ANTITOXIN IN DIPHTHERIA.

The prevalence of diphtheria in Kentucky and Indiana, and, in fact, all over the Mississippi Valley, makes it highly important that the profession should realize the dangers of this disease, which is fatal to so many children, and be ready to meet any and all cases promptly. First, all cases of diphtheria and all suspected cases should be isolated. If in no other way, a single room in the house should be set apart for the diphtheritic patient, and all communication between the patient and other children and every one except those nursing the child should be forbidden, and all expectorated matter, mops and cloths soiled with the diphtheritic deposits should be burned. All the bed-clothing and every thing that the excretions and secretions from the nose and mouth come in contact with should be thoroughly cleansed—boiling is sufficient for the clothing. Formaldehyde is now one of the best disinfectants, and the one most generally used. In the absence of formaldehyde, sulphur should be burned for several hours so as to thoroughly saturate the room with its fumes. Of course, the room must be made tight so as to retain the sulphur fumes for a long time.

The general treatment for diphtheria is familiar to every practitioner, and it is needless to say that supportives both in the way of

food and medicine are always to be considered as matters of great importance. The specific treatment consists of the injection of antitoxin, and there should be no hesitancy on the part of any physician about the use of antitoxin, as clinical experience has shown conclusively that it is an agent from which much positive good can be obtained, and from which no harm can be expected. If you have any doubt whether to use antitoxin or not, use it, because it can do no harm and puts you and your patient on the safe side. One thousand units of the condensed is supposed to be enough in ordinary cases, or two thousand of the weaker. However, if you gave more of either there would be no danger, as we know of no danger at present from large doses. If, after the antitoxin has been used, there is no decided improvement in twenty-four hours, it should be repeated, and the dose increased if the practitioner thinks necessary. In severe cases, if there is no improvement in twelve hours, the dose may be repeated and increased. It should further be remembered that most of the fatal cases of diphtheria prove so within forty-eight or one hundred hours, and for that reason there should be no delay about using antitoxin, for if there is one thing demonstrated in practical medicine, it is that antitoxin has been the means of reducing the mortality from diphtheria in a great degree.

The antitoxin made by Parke, Davis & Co., Stern and Mulford are standard preparations. No doubt there are many other brands equally as good, but we are familiar with these, and feel safe in recommending them. It is a disease that should not be permitted to become epidemic. If it is properly treated and managed, one case is all that should occur in any family, unless more than one child became infected simultaneously, which is very unlikely. The anti-diphtheritic serum of Parke, Davis & Co. is put up in doses as follows: No. 1, 500 units, for suspected cases and for immunization; blue label. No. 2, 1,000 units, for average cases; yellow label. No. 3, 1,500 units, for severe cases; green label. No. 4, 2,000 units, for very severe cases; pink label. Each dose is put up in a hermetically sealed glass.

In making the injection, care should be taken to have the field rendered thoroughly aseptic by the liberal use of soap and water and a solution of carbolic acid or some other suitable agent.

Current Surgical and Medical Selections.

CUTANEOUS CANCER CURED BY RÖNTGEN RAYS.—Stenbeck, of Stockholm, in *Mittheilungen aus d. Greazgebiete d. Med. u. Chir.*, Bd. VI, No. 3, briefly reports a case of cancrroid healed in the above manner. The patient was exhibited before the Swedish Medical Union, and the article is illustrated by photographs. The case is claimed by the author as the first of the kind on record. Patient was a woman aged seventy-two years. Two ulcers were present upon the dorsum and right half of the nose. They were roundish and confluent.

The diagnosis of rodent ulcer was made by Professor Berg, and the case referred to the Röntgen Institute.

Daily sessions were begun of ten to twelve minutes' duration, the lamp being held fifteen to twenty cm. from the surface. After four sessions the reaction began, and, after eight or ten exposures, profuse suppuration was in evidence, coming less with time. After thirty-five sessions the ulcers began to look clean and smooth, the epidermal islets were cast off, and new epithelial tissue began to form.

The treatment now became more vigorous, exposures prolonged to fifteen minutes each at only ten cm. distance. A weak reaction appeared, but the new-formed epidermis was not affected, and it was evident that a complete cure had resulted.

The greatest resistance was naturally offered by the hard wall-like circumference of the ulcers. An entire month was required to overcome it. It decreased in height and width, then broke up into individual segments, which in time completely disappeared.

Patient would not consent to have a piece excised for microscopic diagnosis.—*Med. Review of Reviews.*

STERILIZED V. RAW MILK.—The final word in regard to the sterilization of milk for infant feeding has not yet been spoken. The value of sterilization in delaying the putrefaction of milk is undoubted. When milk must be kept for several hours in overheated, badly ventilated rooms without the aid of ice, sterilization or pasteurization (70 degrees C.) can not be omitted. But it must be remembered that neither of these methods adds any thing to the food value of the milk thus treated. The exact contrary is claimed by such men as Fraenkel, Victor Vaughn, Chapin, and Crozier Griffith. On the other hand, the immense value of sterilization in such charities as the Straus Milk Stations in New York City is beyond dispute. Further knowledge is greatly desired as to the role that sterilization plays in the digestion of milk by infants. Jemma (*La Clinica Italiana*) reports a series of laboratory experiments undertaken to ascertain the relative digestibility of raw and sterilized milk. His experiments seem to show that fresh milk is more easily digested by pepsin and dilute hydrochloric acid than milk

that has been sterilized, but the reverse is true when sterilized milk is treated with pancreatin. For the first four hours the sterilized milk produces more peptones when treated with an artificial gastric juice than does raw milk. Other experiments by Jemma apparently prove that the digestibility of both sterilized and raw milk is greatly increased by their dilution with a ten-per-cent solution of sugar of milk, or, in other words, sterilized milk that has been diluted with an aqueous sugar of milk solution is more easily digested than undiluted sterilized milk.

In the language of Captain Cuttle, the value of these experiments lies in the practical application thereof, but they do not militate at all against the statements of Dr. G. T. Palmer (*New York Med. Jour.*, September 8, 1900), that "sterilized milk is greatly inferior to raw milk from a dietetic standpoint;" or that of Crozier Griffiths, that "sterilization is the lesser of two evils." Dr. Cotton is not far from the truth when he writes that if milk is secured under proper hygienic conditions, sterilization or pasteurization is worse than useless.—*The Chicago Clinic.*

METRRORRHAGIA IN YOUNG GIRLS.—Siredy (*Revue prat. d'Obstetrique et de Gynecologie*, 1900, No. 3) calls attention to cases of metrorrhagia in young girls in whom no local cause can be discovered to account for the phenomenon. The writer believes that while heredity may play some part, the natural tendency is aided by overexertion, especially by horseback riding, cycling, dancing, etc., which stimulate the pelvic circulation.

As regards treatment, hot vaginal douches and tampons are rarely necessary, and should not be resorted to except in extreme cases. Prolonged hot rectal irrigation with the double-current tube is a useful means of local treatment. Absolute rest in bed throughout the entire period should be maintained. Long walks, dancing, the use of the bicycle and sewing machine, horseback riding, or long standing must be interdicted, and at other times should be permitted only in moderation.

Careful attention to the general health, regulation of diet, and the overcoming of inherited defects are important adjuvants. Hydrotherapy, especially the cold douche, is a valuable means of diminishing pelvic congestion. Life in the country, with the absence of all exciting social elements, is preferable.—*Amer. Jour. Med. Sciences.*

THE DIAGNOSIS AND TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.—W. E. Wirt (*The Cleveland Medical Gazette*). The author agrees with Marsh that the congenital cases of dislocation of the hip are far from uncommon, and are met with in individuals who are otherwise healthy. It is on account of its reputed rarity that it is apt to be overlooked or mistaken for some other affection of an entirely different kind. To confirm this opinion a number of cases are reported. Some were supposed to have spinal disease and others infantile paralysis. The diagnosis depends upon the attitude of the child while standing, the peculiarity of

the gait in walking, the prominent hip or hips, shortening of the limb, if single dislocation, pain, delayed walking, limitations in the motions of the joint, crepitation, movement sometimes of the head of the bone over the pelvis, and above all the relation of the head of the bone to Nélaton's line. The writer's plan for treatment is to use by manual or mechanical means all the force necessary to bring the head of the bone to its normal site. In this case the proper muscles are elongated, which is safer than cutting the wrong muscles.

The non-cutting reduction method is rarely effective after the age of four or five, but is especially effective in infants or in those under two years of age. No unpleasant symptoms have been traced to the severe traction, and in some cases 150 to 200 pounds were used.—*Archives of Pediatrics.*

MASSAGE IN FRACTURES.—Gep. Woolsey (*Annals of Surgery*). The author, after quoting Champonnière's statements concerning the relative values of mobilization and massage instead of immobilization, in the treatment of fractures, says that: "Certain fractures, especially the oblique fractures of both bones or the only bone of a limb, require a retentive apparatus to prevent the sliding by or longitudinal displacement of the fragments, and thus are not suitable for massage until some consolidation has occurred, requiring from ten days to three weeks. But when one bone of the arm or leg is fractured and is splinted by the other bone, massage may be applied in most cases from an early date."

He does not in any case discard splints, but uses them in conjunction with massage. Moreover, he advises, especially in Pott's fracture, when there is much posterior or lateral displacement, immobilization in plaster for ten days, to be followed by massage and passive motion, and warns against vigorous passive motion in recent fractures, in which the deformity readily recurs, as being a prominent factor in the production of non-union.

Better functional results are obtained by primary immobilization and subsequent massage than when massage and passive movements have been first employed, but where, owing to persistence of deformity, immobilization had finally to be resorted to.

In the treatment of Colles' fracture by massage and without a splint, the author has had perfect functional results, and claims that the deformity is no greater than when the splint is employed.—*Montreal Med. Journal.*

TREATMENT OF UNUNITED FRACTURES.—(*Journal of the American Medical Association.*) In a paper by C. D. Evans, in which he deals with the treatment of compound and compound comminuted fractures, he makes some interesting remarks concerning the treatment of non-union of fractures. He considers that almost all cases should be submitted to operation, and details a simple, but in his hands a very effective, method of dealing with the fractured ends. After freely incising the soft tissues down to the site of the fracture, he reflects the periosteum, dissecting it from both

fragments toward the fracture with the idea of securing more for the covering of the bone than by dissecting from the site of fracture up and down. The bone thus freed of periosteum, the thickened bone is removed until true bone is secured; then with a small-sized drill in each fragment three holes are made, directed toward each other so as to come in direct apposition, none of them being allowed to enter the medullary canal. The fragments are brought together with No. 3 chromicized catgut, the periosteum sutured over, wound closed with interrupted sutures and bandaged with plastic bandages just far enough to cover the wound; then he applies two splints made of "band iron" shaped to the sound limb, fitting it except that at the place corresponding to the site of fracture a loop is made in the iron so as to raise it about two inches from the wound, admitting thorough asepsis in after-dressing. It is important, he considers, that there should be even and uniform pressure applied to the whole of the limb distal to the site of the injury, and also for some distance on the proximal side. This he secures by the application of cotton-wool and careful and firm bandaging.—*Treatment.*

DIETETIC TREATMENT OF BRIGHT'S DISEASE.—In dietetic treatment of Bright's disease, as a general rule, dark meats, such as wild fowls, and extracts of meat such as Liebig's, should be avoided. The chief danger in such foods is the toxic properties of the ptomaines they contain. In the periods when the disease is not active white meats can be used, all condiments to be avoided. Some patients bear fish badly, but shell-fish can be used in moderation. Some patients bear milk and vegetable diet badly, and in such meats can be cautiously used, the urine being frequently examined to see that the albumin does not increase. Eggs are a disputed article; sometimes they agree well and sometimes badly. When, however, the digestive tract is in good condition they usually are well borne. Milk acts as a diuretic, diminishes the albumin, and increases the urea. Three and a half to four liters a day may be used. Certain patients can not use an absolute milk diet, however, and in them a mixed diet is useful. A grape diet, skimmed milk or koumyss may be used to advantage. Most authors allow beer and a slight amount of light wines. In acute Bright's disease physical effort often increases the albuminuria. In this condition, and in the acute exacerbations of chronic nephritis, the patient should be in bed. In the chronic condition slight exercises are admissible, but where there is much polyuria or hypertrophy of the heart it is not to be permitted.

Patients should avoid being chilled, and in winter should remain in a temperature as near as possible 75 to 80 degrees, and should wear flannel underclothing. The functions of the skin should be carefully looked after; baths, tepid and hot, followed by friction and massage, are recommended by most authors, though Lecuche and Talamon recommend the cold baths. *The Medical Times.*

Special Notices.

SANMETTO IN SPASMS OF BLADDER NECK.—Sanmetto is not new to me, as I have used it two years. I will report a case that came under my treatment on the fourth day of February. A lady about forty years of age had spasms of the neck of the bladder. She was in constant pain. She could neither sleep nor sit still. She was compelled to urinate as often as every half-hour. I commenced giving her Sanmetto, a teaspoonful every two hours for the first twelve hours. The next twenty-four hours I gave her a teaspoonful every three hours, and the next twenty-four hours, every four hours, unless sleeping. Discharged the woman the fifth day as well, and she has been well ever since. A prominent physician of our city had been treating this patient, but she received no benefit from his treatment whatever.

WM. S. McLEAN, M. D.

Saginaw, E. S., Mich.

EVERYBODY knows the condition—it's so extremely common and rebellious; some physicians call it general debility, or malnutrition, or nervous exhaustion, or a host of other names. Whatever its name or its cause, there exist the very striking facts that the blood has been impoverished, the nervous system ravished, the vitality sapped out. It would seem extremely rash to make the statement that any one remedy is equally efficacious in all of these cases, particularly so when the usually employed tonics—iron, strychnine, cod-liver oil, etc.—have utterly failed. Yet such is the statement of thousands of physicians whose names are everywhere the synonyms for eminence, integrity, ability; physicians who represent all that is best in ethical, scientific medicine. It is this class of physicians who make the unqualified assertion that Gray's Glycerine Tonic Comp. is uniformly effective in malnutrition, general debility, nervous prostration—whether the condition accompanies organic disease, acute infectious diseases, or exists without ascribable cause.

A CORRECTOR OF IODISM.—Dr. W. H. Morse reports (Southern Clinic for May) success in the use of Bromidia, which, he says, has proved corrigental of Iodia. Discussing his results he says: Vomiting is so frequent and troublesome a symptom, in many diseases, besides irritation and inflammation of the stomach, as to demand much practical attention from the physician. So, although the causes are so various, and although we are actually treating a symptom, for this symptom Bromidia is remarkably effectual. We have all employed the remedy for colic and hysteria, two disorders where nausea and vomiting are as pronounced as they are persistent, and almost the first evidence of relief is shown by the disappearance of these disagreeable symptoms. It is quite as efficacious for the nausea and vomiting from ulcer or cancer of the stomach. There is nothing that will more quickly check the vomiting, and the hypnotic effect is quite in order.—*Medical News.*

DR. J. W. P. SMITHWICK, Lagrange, N. C., has the following to say regarding the use of Ingluvin: I frequently administer Ingluvin to my patients who are in a pregnant condition, and are suffering with nausea and vomiting of a mild degree, and find that it gives a very great amount of relief and comfort. They gain weight during its administration, and their systems are put in a healthy condition, and they are much better prepared and able to stand the strain of labor than those who have not taken the preparation. I have never had a patient have eclampsia after taking Ingluvin, which, of itself, is no small recommendation for it. Ingluvin has, on every occasion, served my purpose well; indeed, far better than any thing else I have ever tried, and I heartily recommend it to the profession.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

PRESENT STATUS OF BLOOD EXAMINATION.*

BY SIDNEY J. MEYERS, M. D.

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To the thoughtful reader of current medical literature it must be evident that much good work is being done, both by physicians and surgeons here and abroad, in this very important branch, and that many of the opinions and conclusions are widely at variance. Notwithstanding these many different views, much valuable information is gained, and we are reminded that, while much has been accomplished, there are many more truths to be learned from blood examinations. The examination of blood for clinical purposes is as yet in its infancy, and many methods employed as well as the technique and apparatus may be called crude as compared with that which through thorough investigation and more study will be later at our command. For study the blood is divided into fluid and formed portions. The fluid plays the important role of carrying nutrition, aiding metabolism, and removing waste products; the formed elements are red and white cells, platelets, and dust. The last two probably have much to do with coagulation. The red cells carry oxygen and are important in organic life, while the white cells, which are of many varieties, are here to combat disease from within and without. The scope of this paper will not allow a consideration of technique nor a discussion of blood histology, for these should and must be familiar to all before attempting to glean any help from its pathology.

* Read before the Louisville Society of Medicine, November 4, 1901.

The reaction and specific gravity of the blood are known, as is the number, size, and variety of blood-cells, and the character and percentage of hemoglobin; also the relative proportion that the red and white cells bear to one another, as well as the normal number in a given quantity. Whenever any of these properties become abnormal, when we find a diminution in hemoglobin, when the cellular elements show a decided change either in character or number, should they not be prime factors in our diagnosis, and should not the degree in which they vary influence our prognosis? Certainly this must come to pass. Still another valuable aid to diagnosis is evident in Widal's reaction, also known as agglutination and serum diagnosis. By this test many diseases, as typhoid fever, yellow fever, glanders, etc., are said to be recognized. The test is worthy of explanation. This phenomenon for agglutination consists in the approximation, clumping, and loss of motility of the organism of some diseases when they come in contact with the blood of a patient suffering from that identical disease. Nearly all the work done upon this line has been in connection with typhoid fever, and the results obtained are very encouraging. Two conditions seem to play an important role in the accomplishment of this test; namely, the dilution of the culture and time of exposure. This test may become absolute when we have found a method and proper technique by which the time can become fixed and the proportion of dilution be made constant. It is certain that this test when absolute will be of great value.

The property of diseased blood to decolorize certain staining fluids has opened still another avenue for good blood work. The Williamson test for diabetic blood is one of value, and in my hands has confirmed urinary diagnosis in the three cases in which I have employed it. The test is very simple, occupies but little time, and is as follows:

Two drops of diabetic blood, dissolved in 40 c.m.m. of water to which is added 1 c.c. methylene blue (1-6000) and 40 c.m.m. of liquor potassæ. The vessel is then placed in boiling water for four minutes, and the methylene blue is decolorized by the diabetic blood, while normal blood leaves it in its original color. Diabetic urine gives the same reaction. Along this line it may soon be possible to detect other abnormal products in the blood, and we may be able to not only detect urea and uric acid, but also to accomplish something along this line which will clear for us a road which leads to the etiology of rheumatism.

Another line of tests has been opened to us by Justus, who, after careful experiments with syphilitic blood, found that in cases where mercury was administered by injection or inunctions the hemoglobin was diminished; whereas, in non-syphilitics, mercury has no effect on the hemoglobin percentage. In other hands it has been unreliable, but I fail to see why, when this test is perfected, it should not be of considerable value. We know that certain drugs, as iron and arsenic, increase the red blood cells, and the hemoglobin in some forms of anemia, and along this line we should be able in the near future to determine whether certain drugs, given for certain diseases, are effective, or whether their administration is simply empirical. A blood examination should be made in all cases of poisoning where the intoxicating agent is unknown, for here is a wide field for the application of abnormal chemistry of the blood. There are other properties of the blood which are not so well understood, and with a more intimate knowledge of these, infinitely more benefit will be derived and another great epoch in medicine will be made. The toxicity of the blood must to-day play a most important part in medicine and surgery, for upon it is built that grand structure, serum therapy, which holds out to the profession more hopes than any of us dare admit. In serum therapy it appears that we have the ideal treatment, and, when perfected, the specific also. When this field of toxicity is investigated, the toxic properties measured, separated, or estimated in any way which may hereafter be devised, I can see how it would be a relatively simple procedure to immunize against many if not all of the infectious diseases by bringing the blood to that standard of tolerance which would confer immunity even as does the diphtheria antitoxin to-day.

The technique of the preparation of an antitoxin is of as much consequence as the establishment of its value; for only recently the tetanus bacillus was incorporated with the diphtheria antitoxin, and an alarming condition prevailed, diphtheritic convalescence with tetanic infection. Unavoidable circumstances no doubt caused this unfortunate occurrence, but it is hoped that because of it none of us will lose faith in serum therapy. The organism of tetanus, whose scarcity in the body is well known, could probably not have been found in the blood of the horse.

Another property of which little is known, and must in time become important in clinical diagnosis, is the power and time of coagulation. When the coagulability of normal blood is known and the

time of its coagulation is absolute, it will certainly be of infinite value if we could estimate any degree of abnormality. Many serious complications both in surgery and obstetrics might be avoided by this simple experiment, and in every case brought to the surgeon, this test should be made.

Just one more of these recent experiments to determine disease by blood examination, and this, the freezing point of blood. When this becomes absolutely fixed, which it certainly will be, we will be enabled to determine the functioning power of the blood, estimate the resisting power of a patient, and in this way greatly influence our prognosis.

Hardly a day passes in our practice that we do not have puzzling cases, and it is found difficult to determine whether we are dealing with malaria or typhoid fever; or, again, with acute gastritis, peritonitis, or perhaps appendicitis. It is in such cases as these that we would appreciate help from microscopical examinations, and to a few of these conditions I would ask your attention.

We know that in certain forms of anemia it is absolutely impossible to make a correct diagnosis without a thorough examination of the blood. For it may be possible that a plethoric patient be anemic when giving the appearance of a sufficiency of blood, and may be suffering from some obscure disease. Only a short time ago I was unable to make a diagnosis in a case; I was undecided whether anemia was causing the neurasthenic condition, or whether the nervous state of the patient was inhibiting the circulation. An examination of the blood made the case clear. We must not only consider the number and size of the red cells, but must look to degeneration, granular or otherwise, which may accompany any of these conditions. It may be possible in the near future to determine the exact cause of these various degenerations, and from this determination many diseases, especially intoxications and glandular diseases, may be made clearer. In malaria, the parasite that causes the disease is found in the blood, and further, the variety, whether tertian, quartan, or estivo-autumnal, is determined. This not only makes for us a differential diagnosis and prognosis, but certainly gives us help in the treatment of this disease, which varies so much in the types that we have at hand. In the estivo-autumnal, which is the severest type, we find cases which assume the character of brain lesions (sunstroke, apoplexy), and where prompt action means a life saved or lost. Our blood mount properly stained and carefully examined will obviate the necessity of delaying the

treatment as well as the diagnosis. While abnormal conditions of the red blood cells play a most important part in the clinical pathology of the blood, yet it seems that more has been gained from the study of the white blood cells or leucocytes. The condition known as leucocytosis seems to control our diagnosis in more diseases than in any of the tests previously mentioned. The white cells appear in the body in many varieties, and the proportion which they retain to the red cells is altered in several normal conditions; thus we have a leucocytosis following digestion, also one of pregnancy, and this should not be lost sight of when we are making a blood-count. In certain diseases one character of cell is increased, while in another a different variety of leucocytes seems to predominate, so that the variety of the cell should be taken into consideration as much as the increase. In typhoid fever we have an infectious disease in which there occurs no leucocytosis. In the first week the blood-count probably is normal; in the second and third weeks we have a reduction of the leucocytes. The more severe the case, the greater the reduction, so that a blood-count in this disease, if accepted at all, must influence our prognosis. If the diagnosis of typhoid fever is correct and we have leucocytosis, then some complication, as ulcers, hemorrhages, etc., is occurring. In pneumonia we have an evident leucocytosis shortly after the chill, and in this way we may be able to tell it from typhoid fever or malaria. If we have a decrease in the leucocytes before or just after the crisis, then our prognosis is more favorable in pneumonia. The type of leucocytes in pneumonia would necessitate a favorable or unfavorable opinion. In appendicitis, which is often mistaken for acute gastritis, we may with advantage examine the blood and find a decided increase in the white cells. I have cited several instances in which the white cells by their increase give us valuable aid to diagnosis and prognosis, and I could go on at some length citing numerous diseases where we find the red and white cells and the hemoglobin other than normal, and tell you how from this blood examination a diagnosis and prognosis is made; but time does not allow that discussion, and I refer you to any of the text-books upon blood examinations. Some of the more skeptical writers contend that the blood examinations, unless made by experts, are valueless. Is not this true of the finer arts in medicine—urology, bacteriology, and pathological histology? It is also necessary that the microscopist's report should be intelligently interlaced with the bedside information, for alone it may be misleading and

valueless. Physicians have become proficient in other branches of microscopy; why not in this branch? What they need is encouragement. Should such a doctor come into our community, we should not only help him by sending specimens which we think will be highly interesting to him, but he should occupy the place of a consultant, his report considered as consultation, and he be given his fee accordingly. The younger men in the profession, whose time is not all demanded of their clientele, may equip themselves, and by a little careful study and industry be able to do satisfactory work for themselves and their older and busier co-workers. Hardly a case of any importance comes under our care unless the urine is examined, and often the sputum, and yet how much more we should learn from the life-giving blood of the body than from the dead waste products! It is true that to-day urinalysis is comparatively easy, occupies little time, and can be performed outside a laboratory, as is done daily by the many country practitioners; while the blood work demands more time, elaborate apparatus, and a great amount of patience. Yet if we can derive that which will be of infinite benefit both in diagnosis and prognosis from this blood examination, will it not be time well spent, add to our reputations, and to the better and more intelligent treatment of our patients?

LOUISVILLE.

THE THERAPEUTIC VALUE OF ALCOHOL.*

BY LEON L. SOLOMON, A. B., M. D.

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Fellows of the American Therapeutic Society, Gentlemen: Our worthy secretary informed me some four weeks ago that the National Woman's Christian Temperance Union had asked for the contribution of papers touching several aspects of "the value of alcohol;" coupled with this information, he requested that I employ the theme as a subject for my essay. Although a manuscript had already been prepared by me, and on another subject, I determined to obey his request, chiefly because, as I thought, it offered an opportunity for the profession, and more

*Read before the American Therapeutic Society, Washington, D. C., May 7-9, 1901.

especially for our society, to make clear before this body of women its position regarding a subject about which there probably is and has been more difference of opinion, in lay as well as in scientific mind, than is the case with any other article within the whole range of our department. Secondly, in assuming to accept the responsibility which the task imposed, I was not unmindful of the fact that a man at once by birth and breeding a Kentuckian might probably better than one other elect and qualify to consider the matter; for is it not said (outside the State, not in it, mind you) "leave Kentucky atmosphere and a good 'article' is hard to find"?

It is to be hoped, then, gentlemen, that actual good will come out of the discussion which I trust this article may provoke. Indeed, the mere fact that so honorable and far-reaching in its benign influence and beneficence a body as the National Woman's Christian Temperance Union should crave information on "the value of alcohol" is in itself all-sufficient reason, demanding that we put forth our best effort in the discharge of the duty.

Until recently, in medicine, by alcohol was understood whisky or brandy, both of which, varying within improper bounds, I think, represent approximately 30 to 56 per cent alcoholic strength. In late years, however, no doubt chiefly because of the cupidity or ignorance of distillers and blenders, some medical men have signified a preference for pure alcohol, in lieu of alcoholic liquors, since these latter are too often prepared artificially, employing "highwine" with ethers, water, burnt sugar, essential oils (from corn and rye), and probably some little good whisky or brandy. These and other so-called "rectified goods," if not absolutely harmful, are, as a general rule, at least devoid of medicinal virtue. That they make a drink agreeable to many is not denied, neither would we question the peculiarly pleasing—too often subtle influence on the nervous system which they possess—an influence sometimes extremely exaggerated with these fancy brands. If the process of distillation has been unknowingly or carelessly carried too far, whereby amylic alcohol (fusel oil) comes over, the effect from the administration of such alcoholic liquor is at once directly harmful. A pure ethyl alcohol is one half less lethal than an impure one, containing amylic alcohol. But "alcohol as a beverage" need not concern us now; it is alcohol, and pure alcohol, as medicine—pure alcohol in disease, which occupies our attention. Pure whisky at least two years old, and better four years old (brandy, never less than four), containing

only a trace of fusel oil with some acetic, butyric, and occasionally some valerianic acid will, in four years under proper conditions, by reason of the reaction occurring between these contained acids and the alcohol, develop various ethers, which add considerably to the quality, the stimulation of the brand, giving it bouquet at the same time.

Too often, I fear, those who condemn alcohol in medicine have reached conclusions along false premises. The specimen used was not pure, the indication for it was not exact, the size of dose may have been improperly gauged, or the time of administration possibly wrong; all of these points are necessary, you observe, in the exhibition of any drug, but more especially when any of the active and powerful list to which alcohol belongs is being used; purity is *sine qua non*; next, a clear, definite idea of the indication the drug is supposed to meet and the effect it will produce, including the by-effects, its untoward action—all these are essential ere we can say any drug has been properly manipulated. The stage of the disease and the state of the system are other factors deserving of especial attention, and the time of day with respect to the administration of alcohol is not less important. For alcohol is as often an emergency drug as any other member of the stimulant group, and the hours between 12 o'clock midnight and 7 o'clock A. M. most frequently (because then vitality is at its lowest ebb) demand the free use of alcohol; there are times when seemingly we can employ it at regular intervals throughout the twenty-four hours—here its food quality and antiseptic property are in demand, and it manifests its force as food and as antiseptic.

In this connection I must refer to the misguided minds—often otherwise well-balanced minds—which seek, using every means and bending every energy, to convince the total abstainer, as well as the inebriate, of the curse of alcohol, of its utter uselessness and veritable damnation under any and all circumstances. It is hardly necessary for us to state that such people are mistaken. I might reply to them in the language of the vivisectionist to the pseudo-scientist and anti-vivisectionist: "Did you ever dissect a kitchen roach?" Have you ever tasted a good whisky? Have you ever observed its undoubted good effects in disease? No observing physician can fail to see the good which comes from the judicious employment of whisky or brandy in low fevers, in which, under its influence, muttering delirium disappears and quiet sleep follows, the tongue grows moist, and pulse becomes regular and full, respiration tranquillizes, the skin becomes less parched, and the

fever abates. No sane layman but can see and appreciate the prompt response in heart failure, where alcohol is employed, or in the breaking up of the earlier effects of acute congestion, as in so-called "bad cold." I am convinced that the medicinal properties of alcohol make it inferior to no drug within the entire category, and that its prompt and efficient action render it superior to many.

As Dr. Forquharson puts it: "In turns it may be a stimulant, or a sedative, or a tonic, or a digestive, or an actual food; the argument in its favor, when wisely and prudently used, seems complete, it does us good and can do no harm." To this I would add: In turns it may also be an antiseptic, or an antipyretic, or an analgesic, or a diaphoretic, or a diuretic, or a stomachic, or a cholagogue, or finally, under certain circumstances, a legitimate anesthetic. There is still another class of extremists who maintain that alcohol is a narcotic and paralyzant, who acknowledge it stimulates the heart, but assert this to be due to its narcotizing influence on cardiac inhibition. These statements need only one refutation, and that is, they are absolutely false, as proven by well-known physiological experiments and fixed laws.

It is true large amounts of alcohol do paralyze, but so do large amounts of opium, of digitalis, of aconite, and of many other powerful drugs. Even moderate quantities of alcohol, frequently repeated or habitually employed, produce gastric catarrh and other pathologic states, but this, again, belongs to the subject, "alcohol as a beverage," and need not concern us. Healthy man does not need alcohol, just as he does not need coffee, tea, tobacco, cocaine, opium, or other stimulant or narcotic. The statement made by Lawson Tait, that he was "fully persuaded, after thirty years of life, as hard in work and as full of responsibility as well could be, that the moderate use of alcohol is a necessity in our modern times," seems too bold, and I dare here to challenge such language as in bad taste, from any medical man, and as dangerous, particularly, because it came from so high an authority (in a branch of surgical science). If alcohol did not harm Mr. Tait, an unusual man, whose system, possibly, by reason of his ceaseless toil, could tolerate and oxidize more of the product than could the system of other men, we still have no proof that its habitual consumption, even in moderate amounts, would not harm others, and I marvel that this great man assumed to generalize from one case, and that one his own. Man is never capable of generalizing, or even attempting to reach justified conclusions, where only the ego is concerned. For not

only are there those who possess idiosyncrasy toward the drug, but the liability of creating habit is an ever-present factor. Besides, as a food, though alcohol has this quality in a certain limited sense, nature has supplied us with articles far its superior; and to employ alcohol merely to whip out latent energy, except as the drug is indicated and demanded in the sudden emergency of disease (or otherwise in medicine), is a crime, both against God and man.

Better a life less "hard in work" and less "full of responsibility," and posterity might then be permitted to boast of the real, the genuine accomplishments of normal man, unaffected by stimulants in "modern times." Few persons who partake of alcohol habitually can partake of it temperately and moderately, and yet I am aware there are exceptions to this rule. Those who are under its influence frequently or constantly have lower vitality and lower power of resistance, and are not only more liable to disease, but they are death's surest victims when they do fall sick. For such the very earliest exhibition of alcohol, as a general rule, is an absolute necessity in times of any illness, especially if there be, as is usually the case with them, adynamic symptoms; and with these habitues, the drug is invariably less capable of doing good, first, because of lowered vitality; second, because the system, accustomed to the effects of alcohol as a beverage, does not readily react to it when it is administered as a drug.

The statement that from two to four ounces daily of whisky or brandy is necessary in ordinary disease, does not apply to this class of patients. They require much more. However, at best it is a question, difficult to decide in advance, just how much or how little alcohol is necessary in a given condition, and this must be always a matter of individual bedside calculation. Alcohol should always be given tentatively—never as a routine medicine. Bartholow discountenances the treatment by arterial stimulants of states of depression, and claims that the profession use such remedies in heroic dose often to the detriment of the digestion; with this statement I fully concur, and with respect to alcohol as a stimulant, think it wiser to exhibit it in smaller quantity for its good effect on the secretions and on metabolism. In the states in which alcohol has a pronounced effect upon the circulatory apparatus, the antiseptic influence of the drug in and on the blood and its food value in the system are quite as important, whereby not only is the pulse and respiration improved, the tongue moistened, and delirium assuaged, but the skin becomes less parched, and the

temperature falls, while quiet sleep follows—influences the far-reaching value of which make alcohol an invaluable medicine. So far as I am acquainted with drug action, none other is capable of doing so much. Before we take up the question of the value of alcohol in individual states, it is well that we have a clearer idea of its pharmacodynamics.

The Physiological Action of Alcohol. Its influence on the circulation is a matter of first importance, since by this influence every function of the organism is more or less affected, and cell life is, with hardly a single exception, invigorated. This is due, not only to increased blood supply, but, in some instances, to *direct* stimulation, so-called specific drug action. The influence which alcohol has on the circulatory apparatus has no parallel in pharmacodynamics; it at once makes the drug unique in the materia medica. So rapidly absorbed from the stomach is alcohol, that its action is in evidence almost at once, making it a most valuable, diffusible remedy. Even before its absorption from the stomach, however, by reflex action, following mere contact with the mucous membrane of the mouth, the cardiac apparatus has been briefly affected and stimulated. After absorption the heart-muscle is directly acted upon and stimulated, as is, probably, also the accelerator center in the medulla, and possibly, likewise, the cardiac motor ganglia *in situ*. The heart now beats quicker and stronger, and arterial tension is raised; next, the vasomotor centers in the vessel walls are depressed or inhibited, and the vessels of the entire body dilate, especially, though, those vessels in the superficial parts—the skin; blood pressure now temporarily falls, and the heart temporarily slows until the later and pronounced effect of alcohol on the cardiac muscle proper asserts itself for a second time. This latter action, namely, on the heart-muscle, marks by far the most prominent action of alcohol on the circulation (as I have several times been able to demonstrate), and the impression on the heart is now so forcible as to overcome the fall in arterial tension due to vascular dilatation, arterial tension again rising.

As measured, systole is now prolonged, while diastole shortens. These effects of alcohol are apparent in less time than it has taken me to cite them, since the facility with which the drug enters the circulation (from the stomach) is marked. With these effects is apparent a feeling of exhilaration, a general glow and warmth of the entire body, the skin becoming moist by reason of increased blood-supply and by direct stimulation of the sweat glands; temperature falls, while the extremi-

ties warm up; gastric secretion is augmented, liver action is more pronounced temporarily, urinary flow is slightly increased (except by gin, an active diuretic). The slight actual elevation of temperature, which disappears as soon as the skin is acted upon, is probably due to vascular excitement, with its increased tissue oxidation, and also to the heat units—calories supplied by the oxidation of alcohol itself. The stomach, from which alcohol is promptly absorbed, feels the direct and powerful influence of the drug, and if the dose be not too large and be well diluted, the immediate effects are usually good; the highly congested mucosa and secreting glands produce a surplus of juice, digestion being more perfect. It must also be remembered, however, that alcohol is irritant to the stomach; that in concentration it precipitates the digestive ferments and coagulates the albumin; that it abstracts water from tissues, making them sclerotic and inactive. Through the presence of alcohol in the portal vein the liver next feels the drug's influence, and temporarily the function of the hepatic cells is increased, which also tends to aid digestion as well as assimilation. Here the baneful effects of overstimulation or of habitual stimulation are seen, first, in impaired liver function with lessened bile secretion, later in permanent changes in the histologic structure of the organ.

On the Intestine. The bulk of alcohol entering the blood from the stomach, very little reaches the intestine proper, so that the effect directly on the gut is slight, and, strange to say, is chiefly that of an astringent. Brandy, which contains tannic acid, affords a markedly astringent effect.

On Metabolism. By reason of its own avidity for oxygen, alcohol prevents or retards the oxidation of hydrocarbons and of nitrogenous products. The elimination of both urea and carbonic acid gas are lessened, the blood containing at least 30 per cent more CO_2 . Checking tissue metamorphosis, by its inhibiting action on oxidation, the evolution of heat is diminished, and normal temperature is lowered; the antipyretic action of alcohol is due also to its dilating superficial vessels, whereby hot blood is brought nearer to the surface, permitting of heat radiation. Furthermore, the evaporation of augmented sweat decidedly lowers temperature. In pyrexia these latter effects of alcohol are more marked. In apyrexia they may be wanting.

Alcohol is a conservator of vital power. It adds force if it does not add tissue to the body, and within certain limitations may be called a food. Anstie's experiments indicated that a variable amount of

alcohol was burnt up in the body, at least the alcohol seemed to disappear, and could not be recovered by him. Scientists now concur in the opinion that from one to one and a half ounces of alcohol may be burned up in the blood or tissues of a healthy adult within twenty-four hours. In disease even larger portions disappear. The product of their oxidation does not seem to be heat, raising the body temperature (except, as in health, possibly, for a fleeting period of time). The alcohol acts, rather, as would food; in fact, I believe, is food, its oxidation being stored up as potential force and applied according to the demands of the economy in muscular, nervous or glandular power. Abundant experiments and clinical observations (in diabetes and other diseases) have furthermore proven that alcohol under certain circumstances may take the place of food—in fact, for a variable length of time, as repeatedly demonstrated, man is able to subsist on alcohol alone. Advantage is taken of this valuable property of alcohol occasionally in the treatment of disease, especially in diabetes, where, in the removal of a certain amount of carbohydrate from the diet, the administration of alcohol is made to take its place. The ability of alcohol to supply calories of heat (force or energy) is exceedingly great—for each fifteen grains of alcohol consumed, approximately seven calories of energy result.

It is interesting in this connection, and in comparison, to know that fifteen grains of either carbohydrate or albuminous food supply only four calories, and the same amount of fat yields nine. Alcohol is rapidly absorbed; it is rapidly destroyed (burned up), and any amount in excess of the power of the system to oxidize is rapidly eliminated as alcohol by the lungs, the skin, and kidneys chiefly. Fat accumulates where alcohol is administered because tissue oxidation is lessened. This power of alcohol to prevent the perfect combustion of fat is also unique. Technically, it is explained as dependent upon a controlling influence alcohol has over oxyhemoglobin, the oxygen inhibited, as it were, from leaving the cell. It is also asserted that individual cells can not carry as much oxygen where alcohol is present. However this be, we are aware of two facts, and the latter one is very valuable to us, namely: fat in the blood of drunkards increases from 8.65 to 11.70 parts per 1,000 (steatosis), and in wasting diseases, like phthisis, the deposition of fat, under the proper and careful daily administration of alcohol, is often marked.

Nervous System. A preliminary stage of excitement, due to increased

blood-supply, is noted in the entire system after the administration of alcohol, but soon function is diminished, the drug then acting as a narcotic, relieving pain, allaying delirium, quieting restlessness, and promoting sleep. Large doses act as anesthetic, local as well as general, and also as intoxicant and deliriant, as you well know. The sensibility of cutaneous nerves, especially the fifth, seem specifically affected by alcohol, as shown in its promptly relieving neuralgiæ. However, in this class of cases, it is now considered contra-indicated, because dangerous to the moral health of the subject, whom recent research and investigation believes to spring usually from neurotic progenitors. Alcohol is a sedative, possessed of marked anti-spasmodic property. Its sedative influence on the mucous membrane of the stomach is enhanced by CO₂ gas, as is seen in champagne and other sparkling wines. The evil influence of alcohol on the nervous system is very much more marked where fusel-oil, in considerable amount, is present in the specimen.

Ameboid Movement. Decidedly increased by alcohol for a time, and this fleeting property, I am prone to believe, materially conduces to give alcohol certain influence, which it exerts in aborting disease. How often have we felt in grippe and in other epidemics of an infectious nature, where, by reason of great mental and physical strain, we were about to fall victims to the disease, and yet after a moderate-sized dose, say half an ounce, or an ounce, of good whisky or brandy (with or without the addition of quinine) before retiring—we were by morning as chirp as larks and ready for duty. I wish to emphasize this point: alcohol must be in a state of dilution before it can be absorbed.

Respiration is quickened by alcohol temporarily; later it is slowed.

On Digestion Proper. The effect of alcohol is similar to bitters. In the mouth the flow of saliva is reflexly stimulated; in moderation and dilution, before or during meals, to those in lowered health or convalescent from acute disease, or to the aged, with feeble and impaired digestion, or to the tired and weary, alcohol produces a sense of warmth and comfort in the entire abdomen, which soon diffuses itself over the whole body. It dilates the arterioles in the mucous lining and irritates the mouths of the secreting glands, soliciting a more abundant secretion, and, what is most important, it seems to increase the activity of gastric movements, in itself and alone a material aid to better digestion. Those who are fatigued, and whose appetites are wanting, derive great benefit from alcohol, which removes the sense. Claret,

beer, and ale are of low alcoholic strength, and preclude the possibility of both immediate and future harmful effect, while they act beneficially in impaired states of digestion.

Uses. The employment of alcohol in disease is multiform: To arouse and to support the system in sudden depression of the vital powers of life it is a remedy without a peer, and may be given by the mouth, by the rectum, hypodermatically, or applied directly to the surface of the body with friction. In shock, in sudden severe hemorrhage, in asphyxia, in poisoning to counteract the depression, as from aconite, antimony, conium, digitalis, tobacco, chloroform, ether; in fainting, in snake-bite, to tide over the vital powers until the poison can be eliminated, and to directly antagonize (acting here as an antiseptic) the poison in the blood, no remedy is superior, and in the latter instance none even its equal.

Alcohol is useful in acute diseases like diphtheria, smallpox, typhus, typhoid, cholera, pneumonia, yellow fever, the exanthemata, gangrene, septicemia, pyemia, etc., when heart-failure threatens. It is likewise useful in certain stages of various maladies, where it not only acts as antiseptic in the blood, but largely as a food. In these conditions the test of its value is as follows: It should improve the appetite, at least permit of more food being taken, by aiding digestion as well as assimilation; the tongue should appear moist and the skin not so dry; the temperature should fall (at least not rise), the respiration become more peaceful; nervousness, delirium, and subsultus should disappear; finally, if quiet sleep follows coma vigil, the sum total of good has been obtained by the drug. The very young and the very old bear alcohol proportionately better than the adult or the individual of middle life, and they seem to derive greater benefit from it in disease; especially in capillary bronchitis and in catarrhal pneumonia is this observation correct. In certain stages of cerebral or spinal meningitis, to arouse from collapse, alcohol is very valuable; in phlegmonous erysipelas alcohol is indicated. In diabetes mellitus, to afford some of the necessary 2,500 or 3,000 heat calories, alcohol is a useful addition to the drug and dietary therapy of the disease, acting as food or medicine, or as both. In the nausea and vomiting of yellow fever, cholera, cholera morbus, sea-sickness, pregnancy, and in delirium tremens, champagne or other carbonated alcoholic drink acts admirably. Iced brandy is also good in these cases; if it is old, and has acquired aroma, the stomach will often tolerate it better.

In zymotic diseases, in dyspepsia due to micro-organisms, in cholera, in plague, in grippe, in typhoid, in fact, in many infectious processes, especially, though, such as gain entrance to the system through the digestive tract, the antiseptic influence of alcohol exerted on the tract is valuable as a preventive measure. Persons exposed to prolonged cold and brought back to warm quarters are more promptly revived if hot alcoholic drinks are given them. In delirium tremens, iced brandy to control the nausea, or other alcoholic drink to assist in the restoration of digestion and assimilation, is a genuine life-saving measure. Alcohol is, however, contra-indicated when the delirium has resulted from sudden excess and the stomach remains good.

Alcohol has been used in acute inflammation because its *later* action lessens ameboid movement, preventing the migration of white blood corpuscles. In the present light of opinion regarding inflammation, the employment of alcohol therein is open to criticism, but its antiseptic influence (from the germ standpoint of this condition) should not escape us. To prolong anesthesia and to sustain the heart and breathing, lessening the chances of death by reflex action where chloroform or ether are in use, alcohol is of paramount service. In wakefulness due to cerebral anemia, alcohol acts well, but here, as in neurasthenia, it is again dangerous to the patient's moral welfare. In functional impotence, small doses often act like magic; in anemia and chlorosis, good red wine has long enjoyed reputation. In atonic dyspepsia of the aged, in the dyspepsia of infants, in the slow digestion of convalescents, as already stated, alcohol has its place. In the atonic dyspepsia of those leading sedentary lives, and in impaired digestion from physical or mental exhaustion, the danger of "habit" overbalances the direct good. In summer diarrhea of babies, children, and adults, brandy is curative. In malignant disease, alcohol gives comfort, and the wretched, accursed sufferer is at least entitled to this. In suppuration involving bone, cellular tissue, or elsewhere, the supporting power of alcohol, plus its antiseptic influence, will often tide over until the balance of equilibrium is restored and nature can escape by her own *vis medicatrix*. In chronic suppuration and in wasting diseases the effect from alcohol not infrequently surprises us.

Flint reports the case of a young lady suffering with pulmonary phthisis who took one pint of whisky daily for nearly two years, and finally made a recovery from the disease (not alcohol). Indeed, it is marvelous to see how well these patients tolerate alcoholic drinks.

Alcohol in them not only improves appetite and digestion, but it promotes constructive metamorphosis; by retarding the combustion of carbonaceous and nitrogenous substances it lessens waste and thus promotes the deposition of fat, retarding the progress of the disease. In fevers much good comes from the slowing and regulating of the pulse. Finally, alcohol is always indicated where adynamia is a pressing symptom, one of the first indications for its employment in acute disease being a muffled or absent first heart-sound. More promptly, more efficiently than any other drug, it enables the person to call into use all of his available reserve force.

Alcohol antidotes the poison of carbolic acid, both locally and internally. Locally alcohol contracts cutaneous vessels, and, as an evaporating lotion, equal parts with water is agreeable and cooling in bruises, inflamed joints or glands, where it stimulates absorption. The same is much used to bathe the skin of fever patients, convalescents, and the enfeebled; common salt is here a good addition to the alcohol, whisky, or brandy. Diluted alcohol, with lead water and morphine acetate, is superior to the old and much-employed "lead water and laudanum," and flannel cloths, or better, the hops-bag dipped in hot whisky or brandy, relieves neuralgia, toothache, earache, and the like promptly. As a gargle, spray, or mouthwash in scurvy, stomatitis (mercurial or other), alcohol, especially the astringent and stimulating properties of brandy, are salutary. The astringent, anesthetic, and antiseptic influence of alcohol makes it valuable in tonsillitis, pharyngitis, and diphtheria; brandy diluted is a splendid injection, destructive to the gonococcus and stimulating cell repair. The application of alcohol is good for frost-bite, to prevent bed-sores, for excessive sweating of parts, or for night-sweats. In premature alopecia, alcohol alone or in combination with other agents has reputation; for fissured nipples, brandy.

Absolute alcohol is very useful in several parasitic skin diseases and for freckles; it will abort herpes and relieve the pain and discomfort of herpes zoster, or the burning and itching of urticaria; for exuberant granulations and as an application to the erysipematous patch, absolute alcohol is employed. As already stated, it arrests carbolic acid burns. Alcohol is almost a perfect aseptic fluid; its properties locally are antiseptic, disinfectant, astringent, hemostatic, anhidrotic, rubefacient, anesthetic; (18 per cent strong) it is antiferment. It is, therefore, applicable as a dressing to remove fetor, destroy germs, and stimulate

tissue growth in suppurating wounds; in healthy wounds, by coagulating albumin, an impermeable covering results, hastening cicatrization. In hemorrhage, alcohol is serviceable as an astringent, controlling capillary oozing, or as a tampon in the uterus.

In the arts alcohol is much used, and in pharmacy to dissolve alkaloïds, fatty substances, and resins. You have seen, then, gentlemen, the variety of properties alcohol possesses and some of the multiform offices it performs. One more concluding thought: In its proper internal therapeutic application, the utmost discriminating judgment and extraordinary tentative care are necessary.

LOUISVILLE.

THE RELATION OF INTERSTITIAL NEPHRITIS TO THE HEART.*

BY HUGH N. LEAVELL, M. D.

The events occurring in the cardio-vascular system during the progress of chronic interstitial nephritis are recognized as constituting an integral part of the pathologic incidence of this form of Bright's disease. The changes taking place may be briefly stated as: Sclerosis of the arterial system, and hypertrophy of the heart.

As a result of the renal lesion and consequent imperfect depuration of the blood, or conditions which coexist although not necessarily the outcome of the renal changes, an abnormally high vascular tension becomes established. Sooner or later the walls of the arterioles become thickened and inelastic, resisting the onward passage of blood, thus imposing an additional burden on the left ventricle, which undergoes hypertrophy to successfully cope with the high peripheral resistance. Up to a certain point the inevitable hypertrophy of the heart is compensatory, or an "accommodation enlargement," and is fortuitous; so long as it compensates the renal lesion its purposes are good.

The arterial changes are progressive and the increased blood-pressure permanent. The hypertrophied muscular tissue is prone to degenerative changes, shows a greater tendency to exhaustion and weakness than the normal heart tissues, and it is but a question of time until increasing impairment of nutrition of the myocardium, with constantly growing peripheral resistance, results in failure of compensation and dilatation of the hypertrophied ventricles. This adjustment

*Abstract of a paper read before the Louisville Clinical Society, October 8, 1901. For discussion see p. 346.

of the cardio-vascular system to the renal lesion tends to obviate the main danger—the retention of uremic toxins. The debt which the kidneys owe the heart is amply demonstrated when cardiac compensation fails, and the greatly diminished quantity of urine, increasing albuminuria, and rapidly developing uremia leave no doubt as to what organ has conserved the patient's life.

Kidneys which may do well under increased blood-pressure prove miserably inadequate when such support is removed. Therefore, it may be stated that the condition of the heart is the best gauge of the disease.

The clinical history of the termination of the majority of cases is that sufficient urine was excreted to maintain life, and that the direct cause of death came elsewhere than from the kidneys—usually the heart. During the early stages symptoms produced by the cardiac hypertrophy may not be sufficiently pronounced to even awaken the suspicion of the patient. With the progress of the malady, the heart resenting the increased load imposed, evidences of embarrassment of the heart become more manifest, and giddiness, dyspnea on exertion, cardiac discomfort, headache, and palpitation give to the clinical picture the "cardiac" aspect it seldom loses during subsequent progress. The symptoms are at first transitory, but with the onward march of the disease signs of impaired circulation become more permanent and distinct, and during the last few weeks dyspnea is constant, dropsy and uremic symptoms supervene, the pulse loses somewhat in tension, and the heart-sounds become less distinct and accentuated. The pulse, except in rare instances, never loses that element of tension, although it may be modified by increasing weakness of the heart.

In the treatment of chronic interstitial nephritis we have to deal with more than one set of organs—the kidneys. The damage done the kidneys is irremediable, and to favorably influence the progress of the disease we should assist nature in her efforts at conservative systemic compensation. Unaided the preservative adjustment in the circulatory organs, which is nature's compromise with the erring kidneys, is sufficient to extend the course of the disease over many years, and with such perfect accommodation that it may be only through some untoward circumstance that the real condition is discovered.

We must employ all means to support the cardiac muscle and promote the equanimity of its nervous mechanism, and when compensation fails we must strive to restore, if possible, the damaged heart wall.

The conditions which confront us are thickened and inelastic arteries, which are constantly subjected to the strain of a heightened tension, and a hypertrophied and sensitive heart muscle. Thus the patient is exposed to the risk of rupture of the degenerated vessels on one hand, and failure of the hypertrophied heart on the other.

In the management of this disease it would seem wise to abstain from active intervention so long as no subjective symptoms are present. Increase of tension in the arterial system beyond the bounds of safety soon becomes manifest in dizziness, ringing in the ears, headache, disturbed cardiac action, unusual fulness of the vessels, occasionally epistaxis, and it may be temporary amblyopia.

The first sign of a flagging heart is noted in the pulse, which loses some of its hardness and becomes irregular and frequent. Additional signs are dyspnea, post-sternal weight and discomfort, cough on exertion or recumbency, and some diminution in the volume of urine.

We should in the early stages of nephritis endeavor to insure permanency of compensation. If the full co-operation of the patient can be secured, much may be done for his future health. We should not risk misunderstanding by lack of explicitness of direction, or by trusting important details to his memory, but furnish him with full written particulars of the course to be pursued.

At the earliest signs of cardiac embarrassment some restriction in activity should be insisted upon, and when compensation seems threatened, or has already given way, absolute rest in bed should be enforced. It should be remembered, however, that beneficial as rest may be to tide over a period of wavering compensation, prolonged bodily inactivity is undesirable, and may work positive harm by impairing nutrition, thus hastening degenerative changes in the cardiac walls. During the period of rest, massage and passive movements may do much to obviate undesirable results.

The greatest importance attaches to sustaining the patient's mental condition, and regular sleep—one of the best of heart tonics—should be secured. Chloretone, paraldehyde, trional, and sulphonal may serve excellent purposes in this direction. Chloral is frequently a dangerous cardiac depressant, and opium is bad for the kidneys.

The medicinal measures which we can bring to bear upon the heart during the existence of its compensation are limited to the vasodilators. The effect of these remedies is largely mechanical. By dilating the capillaries, lowering peripheral resistance, diminishing the

work of the heart, and allowing freer passage of blood through the vessels, nutrition is improved, excess of tension in the arterial system is overcome, and relief to an overburdened heart may be thus obtained.

To relieve alarming symptoms and to produce a decided beneficial effect upon blood-pressure, no measure is so useful as free catharsis. Selecting a cathartic for this purpose is not a matter of indifference. Some preparation of mercury should be employed, as from it more decided benefit can be derived than from larger doses of other purgatives.

The vaso-dilators most useful in controlling arterial tension are the nitrites and iodides. To meet emergencies, amyl nitrite by inhalation may be employed, but its effect is too ephemeral to admit of its continuous use, and nitroglycerine is usually the drug of choice. Nitroglycerine is very diffusible, and within a few minutes its effect becomes apparent, but at the end of three hours arterial tension resumes its usual degree. Therefore, a longer period than three hours should not be allowed to elapse between doses if a continuous effect is desired.

Judged from effects upon the arterial tension, when administered for a considerable period, the iodides may be considered valuable for relieving the overloaded circulation, and they may also tend to restrain the hyperplasia of the kidneys. The most appropriate forms for administration are sodium and potassium iodides, in from five to ten-grain doses, given well diluted one hour after meals. Mercury protiodide seems occasionally to render very happy service in cases marked by a bilious habit, with coated tongue and sluggish liver. It is undesirable to give a prolonged course of mercury in nephritis.

The heart tonics of the digitalis group should never be used during the stage of cardiac hypertrophy. Digitalis and its congeners are only admissible when there is indication of failing compensation. In employing digitalis, its vaso-constrictor action must be borne in mind and provided against, or the peripheral resistance may be dangerously augmented. This is best accomplished by the simultaneous administration of a vaso-dilator. A good practice is to give the vaso-dilator about one hour after the digitalis. The latter is slowly absorbed, while the vaso-dilators are, without exception, quickly diffusible, and by this arrangement of administration the maximum effect of each falls together and control of tension is secured.

Strophanthus may be advantageously substituted for digitalis when the pulse tension is high. Its efficacy as a heart tonic is established,

and it lacks the arterial action of digitalis. It must, however, be used with caution in advanced degeneration of the myocardium. If digitalis and strophanthus fail to elicit response from the failing heart the outlook is indeed grave, and recourse to other measures holds out small prospect.

Caffeine and theobromine may occasionally prove of value, and nuxvomica and strychnine will always be of the utmost importance as adjuvants to any plan of treatment.

In the employment of the measures referred to it may be stated that digitalis and the heart tonics should in all cases be reserved for a failing heart, while the vaso-dilators may be used throughout, first as conservatives of the heart by modifying peripheral resistance, and afterward as guards to the action of the heart tonics.

Although gymnastic exercises are but rarely permissible in the weak heart of interstitial nephritis, massage and passive movements are much more widely applicable. They increase the circulation of lymph within the tissues and determine to the muscles a larger supply of blood, thus stimulating nutrition and affording mechanical relief to the overloaded heart. The employment of these measures is accompanied primarily by a slight, transient rise in blood-pressure, which is soon followed by a fall in tension, less extreme, and not so long sustained as that following resistant exercises. They furnish a valuable means of obviating circulatory stagnation and malnutrition of prolonged and enforced rest, but too much must not be expected of them. The very nature of the factors which bring about dilatation of the hypertrophied heart of interstitial nephritis precludes the possibility of great or permanent results from any or every means that we can bring to bear. Once dilatation has taken place, the outlook is a dark one.

In the treatment of chronic nephritis we should watch the heart and pulse. Sooner or later the morbid process must necessarily end in death, but this termination can be longest postponed, the patient's interests can best be served, and his condition most securely palliated by placing the heart upon a therapeutic parity with the kidneys.

LOUISVILLE.

Reports of Societies.

THE LOUISVILLE CLINICAL SOCIETY.*

Stated Meeting, October 8, 1901, the President, Ewing Marshall, M. D., in the Chair.

Emergency Surgical Work. Dr. George W. Griffiths: I have had a remarkable run or series of accidents—emergency cases—recently, and it may be interesting to briefly mention a few of them:

Case 1. Railway accident; the patient looked as if he had passed through a threshing-machine. I found it necessary to amputate the right leg, the right arm, and part of the left foot. The man made a splendid recovery.

Case 2. A few days later this was followed by another case where I had to make an amputation at the junction of the middle with the lower third of the left leg. The left hand was badly crushed, and it required much serious thought to determine whether the hand should be taken off or not. I applied an antiseptic splint, with gauze between the fingers to keep them apart, removing one finger entirely, and the man has made a complete recovery with a very useful hand.

Case 3. A few days ago I had another terrible case. The right foot was badly crushed; a compound, comminuted, complicated fracture; and the foot looked like an apple after it has been crushed by a heavy weight. There was almost every kind of fracture combined in this case. Several openings existed at the bottom of the foot, and several stitches were put in and the case dressed with drainage. The toes were separated by gauze. The left leg was badly crushed, looking more like a Mosaic floor than any thing else; the right foot was badly crushed, both calling for amputation. In neither instance was amputation performed. My friends Dr. Marshall and Dr. Bizot were associated with me in the case. The pulse of this man has not been above 90; the temperature ran up to 101° F. on one occasion; since that time the temperature and pulse have ranged about normal.

This case is one that I am quite sure would call for an amputation with almost any one, and it required considerable bravery to attempt to save either leg. I had a talk with my friend Dr. Satterwhite in regard to this and other cases not long ago, and said to him: If I save this man's foot and his leg, and turn him loose on the community with

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

a crooked leg to be forever damned, with probably no gratitude, no thanks for the skill required, I would be an open mark for a suit for malpractice, and the majority of juries in the world would decide against the surgeon.

Case 4. A little girl nine years of age was run over by a street-car, sustaining a comminuted fracture of both bones of the left leg. She was knocked down and dragged for some distance under the life-guard. I put on antiseptic splints with pasteboards anteriorly and posteriorly. Dr. Marshall was kind enough to assist me ten days afterward in putting on a plaster of Paris dressing. She is making a good recovery.

Case 5. I also had an interesting case the other night which, under ordinary circumstances, would call for a trephining operation, but I did not trephine. A man was knocked down by two negroes in the night. I did not even enlarge the opening at the site of the wound on the head. I made a careful examination with the Nelaton (porcelain) probe and could not find any evidence of an external fracture. The man has gone along nicely, and I believe is going to make a complete recovery. I believe the approved treatment to-day is to open the head, like the abdomen, for every thing on earth, making an exploration, but I never do this unless there is some especial indication for it. This man had confusion of ideas for a short time after the injury, but no other symptom. The pupils responded readily to light, and there was no evidence of paralysis. Under these circumstances I did not feel justified in opening the skull.

I do not know that there is any thing especially interesting in the report of these cases, except that they may tend to give us a little more encouragement in attempting to save broken and crushed limbs in cases where ordinarily we would amputate.

Discussion. Dr. T. P. Satterwhite: In a large majority of instances where hands, feet, etc., are injured in railway and street-car accidents the persons expect the surgeon to give them such treatment as will make their hands or feet as good as they were before the injury; any scars or deformities, particularly, they consider due to lack of skill on the part of the surgeon in adjusting the injured parts. They do not take into consideration the fact that a deformed or scarred finger or hand is better than none.

I want to call attention to a double amputation; both legs were amputated, and both operations were done at the same time.

Six weeks ago a man in Indiana was run over by a railroad train, and both lower extremities were badly crushed. He was brought to the hospital in fairly good condition. Although the injury had been severe, he was not laboring under any particular shock, and his circulation was good. Dr. Duncan at the hospital took off one leg, and I amputated the other.

I remember some years ago assisting Dr. Holloway in a triple amputation, three of us operating at the same time, and I was struck with the good condition of the patient after we had finished and put him to bed. It was the same way with the patient whose legs were amputated; there was no shock; little blood was lost during the operation, and recovery has been excellent.

Dr. Wm. Cheatham: I heard a surgeon for one of our large corporations say not long ago that he treated a great many injuries, and where the accidents resulted about machinery, crushed hands, feet, etc., where the wounds were filled with oil and dirt, he rarely had sepsis; but in nearly all injuries by wood he had sepsis. This was a strange statement to me. He said that he handled men who worked in both wood and iron, and stated that he had noticed this difference ever since he had been connected with the institution.

Dr. H. N. Leavell: Along the line mentioned by Dr. Satterwhite I want to speak of one case. The patient was thirty-one years of age, and had clubfeet which had existed for twenty-five years. She had six operations performed, which were all unsuccessful, by one of the best orthopedic surgeons here; and I am sure he had no result because of a cerebral lesion which caused contracture of the muscles after the operation. This is the only reason that could be assigned. I did a double amputation. On account of the nonuse of this patient's legs there was a large amount of fat, and I anticipated more or less necrosis. Nine days afterward in taking out the stitches, there being some suppuration along the tract of the wound, I was very much surprised to find that both flaps had separated and the wound was gaping, exposing the bone. I was afraid of sepsis from this condition; there was much necrosis, and some phlebitis. I put a wet dressing on both legs and kept it there constantly for three weeks, and succeeded in bringing the flaps in apposition by stiff, tight bandages. After six weeks the flaps had entirely healed and there was a pretty scar. Both scars are posterior to the bone, and the patient has good stumps for artificial limbs. Nine weeks after the operation the patient developed

bronchitis, which lasted the regulation period of about two weeks; following this she had considerable cough, which did not yield to ordinary treatment. She also had some elevation of temperature in the evening, and her sputum was examined and found loaded with tubercle bacilli. This will likely soon close the scene. The patient recovered nicely from the double amputation, but is going to die of tuberculosis.

The essay of the evening, "The Relation of Nephritis to the Heart," was read by Hugh N. Leavell, M. D. [See page 338.]

Discussion. Dr. Carl Weidner: The essayist has given us about every thing there is to be said in regard to the explanation of the hypertrophy of the heart in this form of nephritis. There seem to be two factors: First, the irritation of certain toxic substances, and second, the changes in the blood-vessels, causing increased peripheral resistance, for we do not have the same condition in parenchymatous nephritis. In this disease we have a general thickening of the walls of the arteries and capillaries, with increased tension. Thickening is particularly true in the kidney, but in most cases there is a general arterio-sclerosis which must be due to the condition he has mentioned. I also endorse every thing he has said about the pathology of the disease and the therapy. Whenever we find the heart begins to show signs of defective compensation, increasing weakness, dilatation, etc., the end is not far off. Digitalis in these cases is indicated, as he has stated. It is one of our best diuretics, and in combination with nitro-glycerine it forms one of our best means to bridge over the patient in the dangerous period, preventing uremic attacks, etc.

The diet is an important factor in these cases. I have seen patients where the disease seemed to be on the point of terminating fatally, and was able to carry them over for a long time, putting them on a plain diet of farinaceous substances, leaving off alcoholic stimulants and meats. Milk and buttermilk should constitute the major part of the diet in these cases.

Dr. T. P. Satterwhite: I am a little afraid of digitalis, and in the class of cases under consideration I use strychnine and nitro-glycerine. With these two agents I can regulate the heart much better than I can with digitalis.

Dr. William Cheatham: I notice that the essayist made no distinction in the pathologic condition of the capillaries and the larger arteries.

The change in the capillaries is an arterio-sclerosis, and in the larger vessels it is an hypertrophy; the pathological condition is much different; in the capillaries new tissue is formed, and in the larger vessels there is an increase of all the normal tissues of the walls of the vessels.

The doctor did not refer to the eye symptoms, except that in some cases during the early stages there was a temporary amblyopia from irritation about the optic tract. There are other changes which occur in the retina, and which we all recognize, that ought to be mentioned in the paper. There is a marked neuro-retinitis, and changes occur here sooner than in other parts of the body because the collateral circulation of the retina is so poor. The ophthalmoscope is of material assistance, not only in diagnosis, but also in arriving at a prognosis.

Dr. J. W. Irwin: The essayist has given us a resume of the pathological condition of the heart, and of the force that propels the blood through the larger and smaller vessels in interstitial nephritis, but he has not dwelt upon the causes of this disease. His paper would have been more complete if he had done that, as by so doing he would have carried us up to date, touching the various tissues that are affected at the same time we have interstitial nephritis. This disease, as its name implies, is an inflammation between the tubules of the kidney; it is not a disease confined to the tubes, but the tissues between. The mind seems to concentrate itself upon disease of the kidneys particularly, and also upon the part that the heart takes in this disease. We lose sight of the fact that the entire capillary system first becomes affected, for the reason that the kidneys are involved in disease which sooner or later must terminate the life of the patient.

Let us take a cursory view of the condition which exists throughout the whole capillary system, and we find that the disturbance is not confined to the kidneys. It involves the liver and the heart; it involves the whole tissue of the body where nutritional changes are taking place. If the modern view of the cause of interstitial nephritis may be regarded as true with any degree of certainty, we find that it begins in capillary obstruction, and this capillary obstruction is brought about by various causes. Certain kinds of food, for instance, meat, the use of large quantities of alcoholic stimulants, that inordinate thing which we sometimes meet with called gluttony—all tend largely toward producing this disease. We recognize that patients with interstitial nephritis live longer than with any other form of Bright's disease. It is a disorder

which affects the tissues around the tubules more than it does the tubules themselves. The microscope often reveals nothing on account of this disease but hyaline casts, no granular and no blood casts, and no epithelium of any kind.

If we accept the modern view of the cause of this capillary stasis throughout the system, we have authority for saying it is due to excess of uric acid, for Haig has given us the results of observations along this line in his own person, and he has collated a number of cases from hospital and private practice which go to show that capillary stasis precedes interstitial nephritis. We find, too, that with this capillary stasis we have to deal with bradycardia, a slowing of the pulse, and at the same time an increased amount of arterial tension which is necessary to carry the blood through the various tissues. In the capillary stasis all the organs of the body suffer, because the capillary system is all obstructed in the same way.

This view throws some additional light upon what we formerly knew about disease of the kidneys; it also throws some additional light upon the cause of the engorgement of the brain, the eye, and the liver, and also the state of blood-vessels, etc.

Dr. Cheatham has mentioned an important point in regard to the pathology, touching the condition of the larger and the smaller blood-vessels. Now, if this capillary stasis slows the action of the heart and increases its power by reason of the bradycardia, the muscles of the heart must enlarge in order to force the blood throughout the capillary system, for the main physiological force is the *vis a largo*. As the blacksmith's arm enlarges from use, so much the heart enlarge when capillary stasis exists. Whether it be due primarily to the excessive use of alcoholic stimulants or to an excess of effete products retained in the tissues, it matters not. Gluttony, eight times out of ten, conduces to disease of the kidneys, not to interstitial nephritis so often as the excessive use of alcohol does, but to other forms of Bright's disease. Here we have to deal with capillary stasis and an excess of uric acid in the tissues. When uric acid is present, one part to thirty of urea, we have what is said to be the normal amount, but when we find six parts of uric acid to thirty of urea, capillary stasis is said to occur; this has been shown by experiment. Therefore, this condition of the system being present, it conduces not alone to disease of the kidneys, but to disorders of every organ of the body more or less. If we diminish this capillary pressure by any means, as by the application of heat, the Turkish bath, the

withdrawal of nitrogenous foods and alcoholic stimulants, and insist upon a vegetable and milk diet, we diminish the amount of uric acid in the system; therefore we increase the action of the heart, and force blood through all the capillaries, and thus increase the amount of waste products and the amount of water passing through the kidneys. Then we have relieved for the time being our patient. Now, this is new light thrown upon the subject, principally by Haig, who has given us new ideas as to the relation of capillary stasis and uric acid in the system.

So far as the action of digitalis is concerned, after capillary stasis is relieved there can be no objection to its use in the treatment of this disease. No matter about the hypertrophy, for the digitalis helps do what the heart is already doing, that is, gaining force. It is enlarged and its muscles are growing stronger, so as to force the blood through the obstructed capillaries. Digitalis acts not only upon the heart, but all along the course of the blood-vessels.

Dr. S. G. Dabney: I would like to call attention to one point that seems apropos. Once in a while patients are brought to us for obstruction about the air-passages who are really suffering from heart or kidney trouble. I had an illustration of this not long ago. A child was brought to me by her mother to have an enlarged tonsil or an adenoid removed. She mentioned that the child had some shortness of breath, that she was restless at night, etc., symptoms which I hardly thought were attributable to local obstruction about the nose. I asked that the child's heart and urine be examined, and it was found that she had a nephritis. Some of the cases of death which we hear of from chloroform or other anesthetics in operations for adenoids may possibly be cases in which the operator has not fully investigated the heart and kidneys, assuming that the symptoms are entirely due to the local trouble.

In regard to the eye symptoms of nephritis, this is a subject which has been before us quite frequently. Statistics are exceedingly hard to get as to the frequency of retinal involvement, partly, at least, because it is not customary to examine the eyes of a great many of these patients who have interstitial nephritis unless they complain of failing vision. So far as statistics can be obtained, they seem to show that 15 to 25 per cent of cases of interstitial nephritis show some retinal involvement. Perhaps if a larger number of cases were examined a larger percentage would be discovered.

I would hardly suppose that the transient amblyopia that occurs in the early stages of the disease was due to an exudate about the optic nerve. I am more inclined to think that it is due to some influence upon the nerve-centers of the cerebrum.

Dr. George B. Young: The question of diagnosis of interstitial nephritis has not been touched upon. I desire to express myself as to the utter inefficiency of urinary examinations as ordinarily made. I had occasion during the past year to follow several cases for months, and in the first specimen of urine, while by chemical examination I could find no albumen, I was satisfied from the character of the urine, estimation of urea, specific gravity, etc., that the patient had interstitial nephritis. I made repeated examinations of the twenty-four hours' urine, and found that I had all kinds of results. I then went into the literature as extensively as I could in order to determine what was the normal specific gravity of urine and what was the normal excretion of urea, and found that all authorities expressed themselves differently. I undertook then to estimate the amount of urea excreted with the patient on diet. I found that the excretion of urea varied, *pari passu*, with the amount of nitrogenous food ingested, viz: when nitrogenous food was entirely withdrawn there would be a much smaller amount of urea excreted, and when meats, etc., were allowed the quantity of urea would be largely increased; so I became satisfied that there was no trouble with the kidney, that the symptoms were probably due to the patient's impaired nervous condition, lack of exercise, etc., because without any drug treatment recovery took place. After repeated examination of the twenty-four hours' urine, covering a period of four or five months, the quantity of urea excreted varied directly with the diet, which would not have been as exactly the case had there been any deficiency of the kidney.

I have had several cases of this kind, which have made me very skeptical about the reliability of urinary examinations as ordinarily made, especially by examiners for life insurance companies. I am satisfied that the text-book statements of what you ought to diagnose from what you find in the urine are entirely erroneous. Where there is no other symptom except something to call attention to the urine, the mere finding of a low specific gravity or variation in the amount of urea excreted does not necessarily mean any thing, and further and repeated examination of the patient and urine should be made.

Dr. W. H. Wathen: I think some of the members are mistaken in the idea expressed, that only the small vessels or capillaries are involved

in the degenerative changes known as arterio-sclerosis. I think you will find that even the large vessels are involved. As a result of this people sometimes have obstruction terminating in gangrene of the extremities, or rupture of vessels and hemorrhage into the brain because of thickening of the coats of the vessels and narrowing of their caliber, thus in a degree destroying the normal tissue of the vessels. The heart, it is true, does not participate in the degenerative changes, but becomes hypertrophied in rather a normal way to accomplish the increased labor that is thrown upon it.

Interstitial nephritis is evidently the result of obstruction, possibly plus a poisoned condition of the blood because of imperfect circulation due to contracted capillaries. It is not only the retention in the system of uric acid, but it is the retention of all the poisonous elements that are excreted through the kidneys which causes injury to the system and shortens life. Of course the indication for treatment is easily understood, but the results are not often what we would desire. If it is possible, we ought to give such agents as will increase the capacity of the capillaries and increase the force of the heart, but there is no remedy that can possibly constantly dilate the capillaries without having an injurious effect upon the system. We can not keep up the treatment by such remedies as nitro-glycerine without very soon having deleterious effects of the drug, therefore this agent is only of use in extreme cases, where it may be used with some degree of benefit. We can use atropine more constantly in cases of this kind. While I have not seen it suggested, from a physiological point of view I think the suprarenal extracts might be used in such cases, because they have a marked effect upon the heart's action. A short time after administration of suprarenal extract the face becomes flushed, which would indicate that the capillaries are dilated, either from pressure or some physiological action of the drug.

I would not give digitalis in interstitial nephritis because of its action in contracting the capillaries. In thirty years' practice I have never thought that digitalis had any effect upon the action of the heart. I would give strychnine in large and repeated doses in all stages of the disease. I think this is the best remedy we have, and absolutely the only remedy that acts as a direct stimulant and tonic to the nerve- and muscle-tissue of the heart. I can not say what the results would be, but it would appear that such remedies as the protiodide of mercury would be indicated.

Dr. William Cheatham: Dr. Irwin's views in regard to interstitial

nephritis are probably the correct ones. I think the primary changes are in the capillaries, the heart and kidney changes coming on secondarily. The pathological changes, as I understand them, in the small vessels and in the large vessels are entirely different. In the small vessels, the arterioles, or capillaries there is new tissue thrown out, and in the larger vessels there is a true hypertrophy of all the tissue that goes to make up vessel walls.

Concerning the statements made by Dr. Young, I have seen two or three cases where the patients died within six or eight months after examination of the eyes with absolutely no derivatives in the urine. In these cases the ophthalmoscope showed marked neuro-retinal changes. In some cases no renal derivatives can be discovered for two or three months after characteristic changes are detected in the eyes. That is one of the difficulties in this form of Bright's disease.

Dr. H. N. Leavell: I am glad to see that the members value the paper highly enough to discuss it. I fully appreciate every thing that has been said. Dr. Irwin has brought out a very good point in regard to other portions of the system rather than the kidney being affected primarily. I think this is perhaps the correct idea concerning the matter, but the condition of the kidney becomes more serious, because the kidneys are the principal eliminating organs of the body. I can not agree with him in regard to the administration of digitalis during hypertrophy of the heart; we should leave the heart alone as long as we can, and I think rather than assisting nature, as he seems to infer, the converse would be true—we would increase the hypertrophy and promote the dilatation on account of too much stimulation, and tend to diminish nutrition in this way.

In regard to the administration of anesthetics in these cases, of course chloroform is the only anesthetic to be administered, and even this should not be given to a patient with interstitial nephritis unless the operation is imperatively demanded. But in parenchymatous nephritis, superinduced by diphtheria or scarlet fever, or where we have a condition of the throat as adenoids, requiring such a short time for operation, if the heart-muscle is still in good condition I see no reason in the world why we should not administer chloroform.

I think the point brought out by Dr. Cheatham in regard to arteriosclerosis is one of degree rather than difference; that is, the arteries have a greater amount of tissue to be involved, while the capillaries have but one coat. I think the change is the same in both instances, except in regard to the amount of tissue to be involved.

PHILIP F. BARBOUR, M. D., *Secretary.*

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TETANIC ANTI-DIPHTHERITIC SERUM.

The recent unfortunate occurrence in St. Louis of injecting anti-diphtheritic serum contaminated with tetanic virus demonstrates the importance of taking every precaution to prevent an accident of such gravity as the one referred to. None of us were prepared to believe that the tetanic germ would rest quiescently in the body of any animal for twenty-eight days, as was proven conclusively in this instance. Further, if it remained there twenty-eight days, it is difficult to determine just how long it may remain without the animal presenting some positive evidence of lock-jaw. It is to be hoped that the good judgment of the profession will prevail, and that they will continue to use the anti-diphtheritic serum in all cases where it is demanded, as there can be no question but that this is an antidote for diphtheria.

This accident in St. Louis, while it resulted in the death of a number of little innocents, will, in the main, be of great benefit to the medical world and humanity in general; and, while the whole profession deplores such an accident and sympathizes with the man who had charge of the laboratory in which this serum was manufactured, and the friends of the unfortunate victims, we must insist that every precaution be taken, and from now on all serum should be tested. In

other words, some one of the lower animals should be injected with this serum so that we may know positively whether or not it contains any tetanic germs.

In this connection we are reminded of the importance of having all such institutions as those that manufacture serum for therapeutic use, and those who conduct vaccine plants, under the control of the State Boards of Health or under the control of the United States government. That is to say, each of these plants should be inspected regularly, and the serum examined by a competent and unbiased observer. It is absolutely certain that in the near future serum therapy will rank as one of the most important industries in this country, as well as one of the most important means of relieving human suffering and curing disease; therefore it becomes highly necessary that the manufacturers of this serum should take great care so as to establish in the minds of the profession and the public the greatest confidence. This is demonstrated daily by the fact that we have in this country anti-vaccination societies composed of some of the most intelligent, or apparently the most intelligent, people, and it would seem that they are governed by prejudice and ignorance. We say ignorance, but the old adage, "There is none so blind as those who have eyes and will not see," applies in this instance.

There is nothing in the whole history of medicine so thoroughly demonstrated and established as the fact that proper vaccination prevents smallpox, one of the most loathsome diseases with which the human family is affected, and yet the profession is at its wit's end to combat the attacks of these fanatics. We have another set of cranks to contend with—the anti-vivisectionists—and it requires a constant effort on the part of the profession, individually and collectively, to prevent their legislating against vivisection, and still these fanatics eat slaughtered animals every day, not once thinking of the absurdity of their position. The idea of mutilating a good, innocent dog under chloroform is horrible to think of, and yet they eat slaughtered lambs, which are quite as innocent as the dogs. They swallow oysters alive, which to our mind is very much worse than any vivisection that is done in this country by the profession for the purpose of scientific investigation. While there is a difference between the dog and the oyster from the point of intelligence, they are both living animals, and it is to be presumed that it is a greater crime to take the life of a harmless bivalve than it would be to kill a dog which is

able to protect itself in some degree. That many things have been demonstrated by vivisection goes without saying, and, in this connection, is it not better to inject a guinea-pig or a dog with serum and thus test its efficacy, than it is to inject the serum into an innocent child and produce tetanus?

THE IMPORTANCE OF ORGANIZING COUNTY MEDICAL SOCIETIES.

The recent action of the American Medical Association, in which its constitution was so changed as to make alliances between the State and County Medical Societies of this country, makes it necessary that every county wishing a representative in the National Association must have a County Society in order that it may have a representative in the State Society, and from the State Society to the National Association, thus making a grand alliance between all of the societies in the United States. It is to be hoped that every member of the profession in this State will, at his earliest convenience, become a member of his County Society. Further, "what is everybody's business is nobody's business," but in this instance it should be everybody's business to organize a County Medical Society, and to that end some physician or a number of physicians should issue a call to every practitioner, and when they are together agree upon the name of the society, and the present manner of naming the society is to call it by the name of the county in which it is organized. The organization is effected by the election of a President, Vice-President, Secretary, and Treasurer, and by agreeing to adopt the constitution of the American Medical Association and the Code of Ethics, and any regulation that you may wish to make concerning the individual society. Having thus completed the organization you will, of course, have meetings at stated times—once in three months or once each month.

Current Surgical and Medical Selections.

ACUTE LEUKEMIA IN CHILDHOOD.—Dr. Macrae records (Johns Hopkins Hosp. Bull., Baltimore, May, 1900) a case of acute leukemia, of about a month's duration, in a little boy aged three, characterized by anemia, fever, purpuric rash, blood picture of leukemia, hemorrhages, and convulsions, and terminating by death. He draws the following conclusions from a careful analysis of other thirteen recorded cases:

Leukemia is a relatively rare disease in the first decade, only two cases of that condition having occurred in 3,000 autopsies performed by Friedrichshain. As is the case in leukemia at all ages, a large proportion of the patients were males. There was nothing conclusive in the family history of the thirteen cases investigated, as in only one instance was there any evidence of leukemia in the family. The previous history of the children revealed nothing of importance, if we except affections of the tonsils, which were present in several of the cases, and which may possibly suggest something of a causal relationship. In the *Lancet*, London, for 1900, vol. i, p. 227, Hunter has referred to the probable association between foci of infection in the mouth, such as carious teeth, and pernicious anemia, considered as a chronic infective disease.

A possible association with the "lymphatic constitution" must also be considered, although Ewing, who discusses this matter (*N. Y. Med. Journ.*, 1897, vol. ii, p. 37), can trace no direct connection between the two conditions.

The onset is usually sudden, and is accompanied by fever in the majority of cases; but, as a rule, the temperature does not rise very high. Hemorrhage from the nose, mouth, stomach, bowels, and kidneys occurred in the majority of the cases, and was accompanied by a purpuric rash. Enlargement of the cervical glands, associated with affections of the mouth and tonsils, occurred in half the cases, while general glandular enlargement was present in a smaller proportion. The spleen was enlarged in every case, and the liver also in more than half the series. Miscellaneous symptoms complained of consisted of pains in joints and bones, hemiplegia and priapism.

Marked anemia was always present. The highest count of corpuscles showed 2,350,000, and the lowest 1,000,000. The percentage of hemoglobin varied from 40 to 18. The degree of anemia in those acute cases is striking, and suggests the possibility of the development of the disease in children already anemic. The red blood corpuscles did not show any rapid fall while the cases were under observation, the possible explanation being that these children had been suffering for some time from leukemia in a chronic form, and that what was regarded as the whole course was merely an exacerbation at the end. The duration of the cases varied from four to

nine weeks. The diagnosis can only be made with certainty through an examination of the blood. The conditions with which it is most apt to be confounded are: (1) An acute infection, with specially marked throat symptoms; and, (2) a hemorrhagic purpura. In none of the cases did treatment appear to be of any service.—*The Edinburgh Med. Journal.*

SKIAGRAPHY IN THE STUDY OF FRACTURES AND DISLOCATIONS.—M. Manoury, of Chartres, maintains that the mistakes ascribed to the X-rays are the result of erroneous interpretation of the information conveyed, and he advocates greater precision in radiograph examinations. While the clinical diagnosis of fractures has maintained its value, skiagraphy renders it more certain and more precise, especially in complicated cases, and where the swelling of the soft parts interferes with other methods of examination. The fractures in which radiography is specially useful are the following: Those of the upper end of the humerus, which may be the cause of the stiffness and disability frequently ascribed to a bruise of the soft parts; fractures of the lower end of the radius, of the lower end of the bones of the leg, of the astragalus (which were formerly regarded as a very rare injury), and of the metatarsals.

The progressive formation of callus can be readily studied by radiography; it has been observed that, in children, the reparative process in fracture is not limited as in the adult to the immediate vicinity of the fragments, but extends for some distance along the shaft.

With regard to treatment, radiography is valuable in affording information as to the necessity of operative interference in fractures, and especially those in the region of the elbow and ankle.

Von Bergmann, of Berlin, who also submitted a report on this subject, insisted on the value of radiography in fractures of the patella, of the lower end of the radius, and of the metatarsal bones. In referring to the interposition between the fragments of a portion of muscle, as a cause of ununited fracture, he pointed out that although it might be impossible to demonstrate this with certainty by means of the X-rays, such a condition might be inferred when the image projected in the fluorescent screen showed the fragments to be separated by an interval which remained the same, whatever position the fractured limb was made to occupy.—*The Edinburgh Med. Journal.*

TREATMENT OF SCARLATINAL NEPHRITIS.—Dr. Robert Coleman Kemp recommends amyl nitrite by inhalation for uremic convulsions. As regards the use of oxygen in pulmonary conditions due to nephritis may be cited pulmonary edema, pulmonary congestion, or pleurisy with effusion due to oliguria, as sufficient examples. The early use of this agent is the keynote of success, for it will dilate the bronchioles, improve the respiratory functions, and also the pulmonary and general circulation. Such results must diminish the chances of further extension of the morbid proc-

esses, and aid the absorption of those products if already present. As an aid to the elimination of toxins, it improves the condition of the red blood cells and the secretory functions. One of the most valuable agents is normal saline solution. Enteroclysis at 110° to 120° F. with this solution for fifteen minutes to an hour continuously, depending upon indications, and as frequently as three or four times daily in oliguria, uremic convulsions, uremic coma, dropsy, suppression of urine, pulmonary edema, pleurisy with effusion, gives satisfactory results.—*Pediatrics*.

KERNIG'S SIGN IN MENINGITIS.—By Dr. P. Roglet (*Gaz. Heb. de Med. et de Chir.*). Kernig's sign is produced by irritation of the meninges of the lower portion of the spinal cord and of the nerve-roots that constitute the corda equina. In the healthy subject, placed in the sitting posture, with the thighs flexed at right angles to the trunks and the legs completely extended, the fibers of the flexor muscles of the knee-joint are extended to their extremelimit, and their elasticity is almost completely exhausted. In patients suffering from meningitis complete extension of the legs is impossible, due to the contracture of the flexor muscles of the leg. This phenomenon is usually bilateral, although at times it is found on one side only; it disappears when the patient assumes the dorsal decubitus. The time of its appearance or disappearance varies greatly; the same may also be said of the intensity of the phenomenon. When it is present it is valuable as a differential sign from influenza, typhoid fever, infantile paralysis, tetanus, and meningismus; its absence does not, however, exclude the diagnosis of meningitis or irritation of the meninges.—*The Post-Graduate*.

MANAGEMENT OF FACE PRESENTATIONS.—Malcolm McLean (Medical News) has accomplished safe delivery in this condition by a method which has been suggested, but results not reported, by other obstetricians. With the use of Schatz' method, that of converting a face presentation into one of the vertex, correction must be early while the head is above, or at the superior strait, and the waters of the sac undischarged. It is difficult in this procedure to make a diagnosis of face presentation early enough, and it is not easy to so secure the corrected position that relapse into the extended pose may not occur. He thinks that in the majority of cases the faulty position of the head is itself produced as the head attempts to settle into the pelvic canal. The general teaching that the mento-posterior position of the face will be self-corrected as soon as the chin reaches the floor of the pelvis, he considers delusive. This has occurred in but one instance in all of his experience.

He terms his method of dealing with this condition "version by vertex within the pelvis." The patient is put under full chloroform anesthesia; the surgeon's hand is passed carefully into the vulva while the outside hand seizes the body of the child. If there is no uterine contraction the chest is pushed obliquely from behind forward, as much as possible away from the

point toward which the chin is pointing, in the direction of the occiput. The hand within the vagina is at the same time pushed up beside the head in one or other of the oblique diameters of the pelvis so that the fingers can reach the suboccipital portion of the head, while the thumb is used to steady the brow, and with a slight lifting motion imparted to the whole head it is caused to rotate on its axis, the chin passing upward above the sacro-ischiatic notch, as the occiput is drawn down below the pubis. Flexion may be hastened by pressing down the occiput with the outside hand as soon as the face is dislodged from its wrong position.

The writer reports two successful cases where this method was employed, in one of which the chances of its proving successful seemed very doubtful.—*The Chicago Clinic.*

VACCINAL IMMUNITY IN THE NEWBORN AND ITS INTRA-UTERINE TRANSMISSION.—Some interesting facts bearing upon this question are presented in an experimental study by Piéry (*Lyon Medical*), in which are recorded observations upon fifty-nine cases of vaccination practiced concurrently upon the mother and her infant. The mothers were vaccinated once, and upon the infants the operation, if successful at first, was practiced a second time.

Of fifty-nine infants, thirty-six were refractory to vaccination, while twenty-three were vaccinated with success. Of the thirty-six mothers whose infants were thus immune, thirty-two showed themselves refractory to vaccination, and thus proved themselves possessed of the same immunity. Only four infants whose mothers had been vaccinated with success after parturition, and were therefore in a state of receptivity at the time of the infant's birth, manifested immunity when subjected to the test. This conclusion strongly confirms the observation of Beclere, Chambon, Ménard, and Coulon, who found in a series of sixty-five mothers and infants that immunity in the infant was manifested exclusively by those whose mothers showed the same insusceptibility. The author believes that his four exceptions to the rule stated by these observers are scarcely numerous enough to invalidate its truth.

If, however, in intra-uterine transmission of immunity in the mother accounts for the immunity of the child, it does not follow that all mothers thus protected are able to transmit a like immunity to their offspring. In the author's statistics it was noted that while thirty-two mothers transmitted immunity to their offspring, seventeen others bore children who were susceptible to vaccinal inoculation. An interesting observation not included in the series concerned a woman vaccinated without success after a twin birth, who transmitted her immunity to only one of her infants, the other presenting a normal pustule after vaccination.

Combining his results with those of previous observers, Piéry finds that transmission of immunity may be observed in 58 per cent of the cases.

The reason of the inconstancy of transmission of immunity is attributed

by Beclere and his associates to the existence in certain subjects, immunized to vaccinia, of a certain anti-virulent property of the blood. When the blood of such persons is intimately mixed with vaccine virus, the latter loses its active properties. They, therefore, conclude that the transmission of vaccinal immunity to the infants is observed only among women whose blood possesses this antitoxic property.

The intra-uterine transmission of immunity to vaccinia is observed among mothers who have been vaccinated during their early infancy as well as during their pregnancy. Judging from his own cases, the author is disposed to conclude that transmission is more frequently observed among the former class. Of five women vaccinated successfully during the last fifteen days of their pregnancy, and whose pre-existing immunity was therefore disproved, only one transmitted immunity to her infant, which gives a proportion of 20 per cent as representing the frequency of transmission of immunity acquired in the last fifteen days of pregnancy. On the other hand, of forty-four women enjoying an immunity dating from vaccination practiced in their infancy, thirty-one transmitted it to their infants. This would give a proportion of 70 per cent among the mothers whose immunity was acquired in their own infancy. This observation also bears out the statement of Beclere and his associates that the antitoxic quality of the mother's blood-serum is manifested when she has acquired immunity either in early infancy or during pregnancy.

In conclusion, the author states that he does not regard pregnancy as a contra-indication to vaccination, since he has observed no appreciable disturbance in any of the pregnant women he has vaccinated.—*American Journal Medical Sciences.*

Special Notices.

THE attention of our readers is called to the advertisement of Robinson-Pettet Company which appears in this issue. This house is one of long standing, and enjoys a reputation of the highest character. The preparations referred to we commend specially to the notice of practitioners.

SANMETTO IN ENURESIS.—I used Sanmetto in a case of a young miss, thirteen years of age, who was becoming a regular "wet the bed." I had tried all the usual remedies, but failed to make a cure, so I tried Sanmetto, and the result was a perfect cure, as she has not been troubled since the first treatment with Sanmetto, and I inquired to-day, and was informed that she had attended school, travelled two hundred and fifty miles, losing two nights' sleep, but not once has the trouble returned; therefore I call it a cure in every sense of the word, and another triumph for Sanmetto. I can say that in over forty-six years' practice I have never found a medicine that is as near a specific for the purposes intended as Sanmetto.

WM. H. ANDERSON, M. D.

Soda Springs, Idaho.

THE AMERICAN PRACTITIONER AND NEWS.

"NEC TENUI PENNA."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

PLASTIC SURGERY OF THE FACE.*

BY M. F. COOMES, A. M., M. D.

Professor of Physiology, Ophthalmology, Otology, and Laryngology in the Kentucky School of Medicine; a Member of the American Medical Association, the Kentucky State Medical Society, and the Louisville Clinical Society; Ophthalmic Surgeon to Louisville City Hospital and the Kentucky School of Medicine Hospital; Consulting Ophthalmic Surgeon to Sts. Mary's and Elizabeth's Hospital, etc.

I wish it understood that this paper is not intended for a special criticism upon the profession in any way whatever, but simply to call attention in general to the manner in which plastic surgery of the face is done. Most cases of plastic surgery of the face are emergency cases—cases in which other violent or probably fatal injuries have been inflicted at the same time—hence the greater injury receives more particular attention, while the minor injury, such as a broken nose, split lip, or various other wounds of the face, receive only casual notice. The old maxim that "if a thing is worth doing at all it is worth doing well" certainly holds good in these cases. I am sure that I have heard more complaint against the physician for not doing his duty in this particular line of surgery than any other, and I believe that other surgeons will say that such has been their experience. This is due to the fact that all of us are vain to a degree, and many of us to an extreme. The demand for special cosmetics is particularly made by women, and justly so, because much of their stock in trade is in their appearance, and for that reason special attention should be given to the reparation of all lacerated and torn parts about the wounds of the face of a female. I am sure the failure to obtain better results in

* Read before the Ohio Valley Medical Association, at Henderson, Ky., November 11-12, 1901.

surgery of this kind is due to the fact that the physician or surgeon who sees the case does not take sufficient care or use proper judgment in dressing the injured parts. It is true that in many injuries of the face the parts are very much distorted, and it frequently taxes the ingenuity of the surgeon to outline the original landmarks. As an illustration of one of the unsightly deformities that results from injury to the face is the tearing loose of the lower eyelid, the tear commencing at the inner canthus. It would seem to me that nothing is plainer than the demand in this case. The first stitch should be the one which attaches the detached end of the injured portion of the lid to its original site. If the entire lid has been torn loose, then a curved needle armed with a suitable ligature should be passed down through the margin of the lid so as to secure a good firm hold in the detached portion. Subsequently the needle should be passed through the tissues in such a position as to enable the surgeon to adjust the detached parts and make them fast with this first ligature at the most important part of detachment. After this has been done the remainder of the stitching becomes an easy matter.

Another common injury of the face is the broken or displaced nose. In violent injuries, as from the kick of a horse, a lick from a baseball bat or some other blunt instrument, or occasionally from a fall, the full force of which is spent on the nose, that organ is often broken, and frequently is mashed down level with the face. Here, again, the demand is plain and the duty of the surgeon simply a mechanical one. Having ascertained that both nasal bones and the septum nasi have been broken, the patient should be anesthetized, if he is able to stand a general anesthetic; if not, the interior of the nose should be thoroughly cocaineized and sponged out with chloride of adrenaline solution, one to five thousand, which arrests hemorrhage and makes the work in this locality much more satisfactory. The best way to readjust the nose is to take some smooth instrument, as the large uterine sound, a strong piece of steel wire, or, if nothing better can be found, two large wire nails or two ordinary lead pencils. Pass one up through one side of the septum; by main force straighten the nose and retain it there by the introduction of packing, preferably a hollow piece of hard rubber or reed. The nose should be packed so as to retain it in position. If the tubing can not be obtained, the better thing is a long strip of gauze packed and crowded into the upper portion of the nose until the whole of the nasal cavities are full. The packing should be

simultaneous; that is, both sides should be packed evenly along, otherwise the septum may be diverted to one side or the other. Such packing can safely remain in forty-eight hours. It will be painful and disagreeable. Its removal will not be painful, especially if the patient's head is thrown back and the packing sprayed with peroxide of hydrogen, or peroxide of hydrogen reduced one half with water. This will loosen the packing, when the gauze may be withdrawn, giving the patient little or no pain and the surgeon no trouble. At this time the parts may be thoroughly cleansed with any solution that the surgeon may select, then cocainized and the packing replaced, and, if thought best, suitable tubes may be inserted so as to insure perfect breathing through the nostrils.

Where it is necessary to do plastic surgery as the result of traumatic injuries, it is safe to say that the general contour of the opposite side of the face, or of both sides if both are injured, which is very rare, will furnish the operator with a safe guide as to what should be done.

Leaving this subject of plastic surgery necessary as the result of injury, we will take up that of congenital malformation, probably the most important of which is hare-lip. This operation may be done at any time in life, preferably in early life, and particularly so if the lip is so fissured as to prevent the babe from sucking. There is one thing to be remembered in connection with the operation of hare-lip in very young children, and that is that they do not bear the loss of blood well. Secondly, a general anesthetic should not be used in operating upon very young children. The parts can be blanched with adrenaline or anesthetized with cocaine and the coronary arteries clamped on either side so as to have the minimum amount of loss of blood. In fact, it is needless to have any great loss in operating for the ordinary hare-lip; that is, in closing the fissure in the lip itself. The chief aim in doing this operation is to completely restore the velvet line of the lip. The restoration should be so performed as to really have redundancy of tissue at the point of fissure rather than to have a crease or depression. Generally in operating for hare-lip the restoration of the velvet line or the free margin of the lip is the last thing to be done, and just here I wish to say if the stitches are placed in position during such operation and it is found that the position is not such as the operator wants, or that he thinks will result to the best interest of the patient, it is his duty to remove them and place others that will do the work as it ought to be done. In short, in doing this kind of work, make up your mind that you are going to operate to satisfy yourself, and that you

are going to finish the operation just as you want it done. In ninety-nine out of a hundred cases this can be readily accomplished. There is no particular hurry so long as you have no hemorrhage, and this can be arrested by the use of seraphines or other similar clamps, or by the finger and thumb of an assistant. Great care should be taken to oppose properly both the mucous and integumentary surfaces. I use two rows of stitches; first stitching the mucous membrane together and then stitching the skin together, and finally putting in relaxation stitches. The stitches in the mucous membrane and in the skin should be sufficiently far from the margin to warrant that they will not tear out within a short time, and, further, much of the tension will be relieved on the part of these stitches. The relaxation stitches should be of silkworm gut, while the stitches used in joining the edges of the wound should always be silk. It must be remembered that there is very little danger of suppuration in these wounds. However, every precaution should be taken to prevent it. If possible the nostrils should be plugged with iodoform gauze so as to lessen the possibility of the wound becoming infected from that source. After all the stitches have been placed the wound should be dusted with iodoform and covered with iodoform gauze, and this dressing made impenetrable by collodium dressing over all. This dressing should remain as long as seventy-two hours. At the end of that time the collodium should be loosened with alcohol or ether, alcohol preferably, because it is less disagreeable. Great care should be taken in removing the gauze from the wound to not separate the united parts. If the stitches are all found intact they may be permitted to remain three days longer. If there is any suppuration about any individual stitch it will be loose as a result of the suppuration. Such a stitch should be removed and peroxide of hydrogen used to cleanse this wound. The wound should first be cleansed with warm solution of boracic acid. Then the peroxide of hydrogen should be used, a drop at a time, over the site of the wound, and allowed to effervesce until the effervescence ceases. If the wound gaps at the point where the stitch has suppurred, another stitch should be inserted after having freshened the edges of the wound.

In the election of the method of operating for the purpose of entering the nasal cavity or naso-pharynx to remove a tumor of any kind, the rule is that each individual case will determine the best method to be used. The Annandale method, however, which consists in sawing through the palate and pushing apart the right and left halves of the bony structure of the face, is not to be recommended, because the

amount of advantage gained by this method is not sufficient to warrant such procedure. It would be better to practice the method of Rouge, which consists in detaching the lip and cartilaginous septum and pulling the whole lip and nose up so as to expose the anterior nares thoroughly. It is necessary in doing this operation to cut through the mucous membrane on either side of the cartilaginous septum. After the growth has been removed the parts can be replaced, and under ordinary circumstances they resume their normal position without any deformity whatever. If this method is not well thought of, the Olier can be practiced. It consists in making a U-shaped incision beginning at the root of the nose, pulling the nose downward, sawing across the root of the nose between the eyes. The bones are then sawed through in the line of incision, the septum liberated, and the under surfaces and nose are turned downward so as to expose the interior of the nasal cavity. Or the Lawrence method may be practiced, which consists in making an incision beginning at a point below and opposite the inner canthus, and going down to the root of the nose and across, joining the two under the root of the nose. In this way the soft part of the nose, the cartilaginous septum, may be turned up, and, if necessary, the whole septum may be removed. These are the easiest methods to practice, and probably the ones that are less liable to give trouble, and when the patient is restored to health the scars will show but very little.

In doing an operation for the removal of a large growth from the pharynx I have not yet found it necessary to do tracheotomy, and I do not expect to find it so, because the Trendelenburg position, or the lateral position with the feet elevated to such a degree as to insure the possibility of the blood draining away from the pharynx and larynx, enables us to avoid tracheotomy. The great objection to tracheotomy is that it is liable to be followed by pneumonia, and that is really an unnecessary and troublesome complication in such cases. I have removed tumors enormous in size from the nose and naso-pharynx, a portion of one of which I here present. The masses contained in this bottle are less than one half of what was removed from the patient's nose and pharynx. The entire space of the pharynx and nose was filled. A large mass projected through the right nostril, and the mass pushed the uvula forward so as to project it beneath the upper incisor teeth. The patient was absolutely unable to shut his mouth, yet I removed this fibro-angioma without losing a great quantity of blood and without tracheotomy.

LOUISVILLE.

STRICTURE OF THE ESOPHAGUS.*

BY EDWIN WALKER, M. D.

I am led to present to you the subject of Stricture of the Esophagus because the condition, while not common, is not rare, and any of you are liable to be called upon to manage such a case. My personal experience embraces three cases, and two of them were so near moribund that any attempt at relief was out of the question, and one died before it reached its home.

The third I desire to place here on record, because there are but few operations of this character done, and some features are quite interesting. In looking over the text-books on surgery I was surprised to find so meagre description of this distressing condition. Senn's Practical Surgery does not mention it, and when one is dealing with a desperate case, he can not but be impressed with the inadequate directions in most text-books.

It is my purpose to speak only of non-malignant stricture. The stricture of the esophagus is caused by an inflammation and resulting cicatrix. The ingestion of corrosive or boiling substance is the most common cause. All the cases I have seen were from the drinking of concentrated lye, but boiling liquids, as well as acids or other corrosives, have caused stricture. Ulceration from foreign bodies, syphilis, or tubercle is often the cause, and two cases have been attributed to typhoid fever. Notwithstanding the fact that the diagnosis is easy, it is often overlooked until the patient has become dangerously debilitated.

The history of ingestion of an irritating or corrosive substance, followed by painful deglutition, and later great difficulty in swallowing solids, and later still liquids, should be sufficient to lead to a careful exploration. Some of these patients regurgitate the food as soon as swallowing is attempted. In these cases the obstruction is high, but where it is near the stomach the esophagus above becomes sacculated and the patient takes considerable food, and the regurgitation seems more like vomiting. A careful watching of the case, and if necessary a chemical examination of the rejected food, will disclose the true condition. Still, in the case reported, after dilating one stricture I was deceived in this manner, thinking I had passed the probang into the

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stomach when it had passed one stricture, while below that the esophagus was entirely occluded. When the symptoms, therefore, indicate a serious difficulty in swallowing, a bougie or olive-pointed probang should be introduced, and if no obstruction exists it can easily be passed. Spasmodic strictures are rare and occur in nervous patients, and there is no history of injury. If there is any doubt, an anesthetic should be given; then the instrument can be passed with ease. In some cases a soft bougie can be passed more easily than the stiff probang. Thus the diagnosis is usually established without difficulty, and error will only occur when careless examination is made.

The management of these cases is generally easy soon after the injury, before either serious emaciation or great narrowing of the esophagus has taken place. If you are called at the time a corrosive has been swallowed, immediate steps are taken to relieve the inflammation, only bland liquid food is allowed, and systematic sounding begun in two to four weeks. If a foreign body is lodged in the tube, remove it before ulceration occurs. Mayo condemns long-continued efforts to remove by the mouth, preferring external esophagotomy. In one of his cases he was much aided by the X-ray, locating a shoe-buckle; the sharp prongs were to the left and the loop to the right, and by making the incision on the latter side it was removed with ease. Tubercular or syphilitic ulcers should receive appropriate treatment, and sound used during the period of contraction. In all cases gradual dilatation is best. The soft instruments are preferable in recent cases, also safer in inexperienced hands. In the firmer strictures the bougies with metal or olive tips are needed. Great care should be exercised in their introduction. When they stop at the obstruction, firm but very gentle pressure should be used; with this they can usually be forced through, but prolonged and violent instrumentation is dangerous, and it is safer to resort to a radical operation than to risk a false passage or the wounding of important structures by bougies. If you succeed in passing the stricture, repeat the process every second day, gradually increasing the size of the dilatation until a full-sized instrument is introduced; then it should be used at intervals of a month, and later three or four times a year, probably for the patient's life. Cases like this are easily controlled, but unfortunately some of them come to us in such a condition that we are unable to pass any instrument, and I think prolonged manipulation with stiff or hard instruments is very dangerous.

What are we to do when no instrument can be passed? This will depend upon the condition of the patient. If he is so exhausted as to be unable to stand a prolonged operation, it is advisable to make a gastrotomy, introduce a rubber tube, and through it nourish the patient until his condition can be improved. Rest is thus given to the affected parts, and later we may succeed in dilating the stricture from above, and if not, retrograde dilatation can be attempted.

In these cases, however, it seems to me it is best, if possible, to make the operation radical and complete when it is done, and leave the patient in a condition that the dilatation can be maintained by mouth.

Quoting from Gould's Year-Book: "Mayo then discusses the question of non-dilatable strictures. For such a stricture in the vicinity of the cricoid cartilage, external esophagotomy is the operation of choice; just as in perineal section funnel-shaped retraction of the cut portion occurs because of adhesion to the external tissue, and thus future contraction is lessened. Kendall Franks has successfully performed esophagotomy, the divided ends of the tube being sutured over an instrument passed through the nose. For a dense stricture above the arch of the aorta and below a point which can be directly divided, Gussenbauer believes esophagotomy is the best operation. An external incision is made in the neck, the esophagus is opened, the tenotome is introduced, and the stricture is divided."

This leaves us the most common, as well as the most serious strictures, viz., those at the lower end of the esophagus. There are two methods of dealing with these cases. Again quoting from the Year-Book: "Abbe's method is performed as follows: Through a gastrotomy wound a stout piece of silk is carried in a retrograde way through the esophagus and out through the mouth or an external esophagotomy wound. The stricture is made tense by engaging bougies in it from below. When the string is used as a saw, the tight bands are divided, while the soft parts are pushed out of the way uninjured. After further dilation has been secured the incisions may be closed or a rubber tube may be inserted to a point above the stricture and brought out of the gastric incision, the latter being sutured to the margins of the abdominal wound. In two or three days the tube is removed, and sounding from above is employed in the usual manner." Ochsner's operation is performed as follows: "The anterior wall of the stomach is drawn out of a left oblique incision through the abdominal coverings; a small opening is made into the stomach sufficient in size

to introduce the finger. A whalebone probe, to the tip of which a silk string has been tied, is now passed through the esophagus, either from above or retrograde, as in the Abbe method. With this guide a loop of silk is drawn out of the gastric incision in such a manner as to leave the guide as a third string. Into this loop a small soft rubber drainage-tube, three feet or more in length, is caught in the middle; by traction on the ends of the double thread through the mouth this loop of rubber tube is drawn through the stomach and made to engage in the stricture. The greater the amount of traction, the smaller the stretched rubber tube, until it is sufficiently reduced in size to enter the stenosed portion; by altering the direction of the pull the tube is drawn out by its free ends and in by the silk loop. Increasing sizes of tube can be employed, and if necessary the third string can be used as a string saw after the Abbe plan of procedure." This operation was first successfully performed by A. J. Ochsner, of Chicago, in February, 1899.

The case I wish to report was as follows: Linnie Johnson, of Haubstadt, brought to me by Dr. C. M. Thomas, January 3, 1901. Was never a strong child. In August, 1900, drank one swallow of solution Babbitt's concentrated lye. She was given milk and oil immediately. Suffered with dysphagia ever since. Is now unable to swallow solids, and liquids only in small quantity. I dilated the stricture, beginning with the smallest olive bougie, and she gained three or four pounds. In March she returned, having lost seven pounds, and again I dilated, and she seemed to swallow better, but in April she again returned more reduced, and I found the probang did not pass entirely into the stomach, and all efforts were futile. We then decided to do a retrograde dilatation. An incision was made to the left of the median line, two and one half inches long. Through this the stomach was drawn, and a horizontal incision near the lesser curvature one and a half inches in length, the vessels were caught with Halstead's mosquito forceps, and the bleeding was slight. The finger was passed into the stomach, following the lesser curvature, and at first nothing resembling the cardiac opening of the stomach was felt. A probang was then introduced from above, but to my disappointment could not be felt from the stomach. I carefully palpated until I found an opening in the diaphragm, and through the stomach could feel its margin. At this point I detected a small depression, and tried first to introduce a bougie, but failed; then with a slender pair of Bozeman's uterine dressing forceps I cautiously

inserted it, and by separating the blades started the dilatation. After this I succeeded in passing a No. 6 French linen olive-pointed urethral catheter, and to this tied a strong braided silk cord and drew it out at the mouth. I shall never forget the relief I felt when this was done. I have done an external urethotomy without a guide and know its difficulties, but to get through an esophagus without a guide filled me with awe. After that the bougies were introduced from below and the stricture fully dilated, and then the finger passed. Dilatation was subsequently continued, and such other treatment as seemed to be indicated was given, and the case has progressed nicely.

EVANSVILLE, IND.

A PLAN OF CAMPAIGN.*

BY W. J. J. PARIS, M. D.

The birth of the science of medicine dates back over two thousand years. It was weakly, diminutive, and primitive at first, but had as a part, in fact, nearly the whole of its nature, the principles of honesty, truth, justice, compassion, sympathy, and all the other good traits of the human heart. The great need which has always existed for such a class of men was the cause of its springing into existence. Its aim has always been to lift up the fallen, relieve the distressed, cheer the anxious, comfort the dying, substitute joy for grief, gladness for sadness, smiles for tears, happiness for sorrow.

During these centuries millions of good and wise men have devoted their lives to study and toil that these objects might be attained. The profession has never taken a step backward, but gone ever onward and upward. Millions of martyrs to this drudgery, terminated only by the sweet angel of death, lie buried in unknown and forgotten graves. They have always been, and always will be, the bravest, truest, and best soldiers on God's green earth. With a full knowledge of his danger, and actuated only by the hope of benefiting humanity, without the hope of adequate recompense or praise if he stands, or fear of a charge of cowardice if he runs, without the roll of drum or inspiration of martial music, or cheers from the populace, when every one is alarmed and running hither and yon in wild affright, when pestilence stalks abroad, and the air, the soil, the water swarm with teeming millions of a most insidious and deadly foe.

*Read before the Ohio Valley Medical Association, at Henderson, Ky., November 11-12, 1901.

the physician alone, weak and humble though he be, stands firm and unterrified, and grapples with the foe in a life and death struggle, and never surrenders till his pale face is turned up to heaven and his noble heart ceases to move. At the same time he knows full well that the beneficiaries of his labor and self-sacrifice will scarcely think of him again when the danger is past, and will, perhaps, call him a fool if he dies in the struggle. Under all circumstances, in all climes, cold or hot, in sunshine or shade of darkest night, wherever there are wounds to bind up, pain to relieve, anguish to assuage, anxiety to share, grief needing sympathy, reason dethroned, or help needed in lowly hovel or princely palace, there you find the physician, calm, cool, cheerful, kind, and helpful, his very presence a benediction. With a pure heart and clean hands and sympathetic soul he toils early and late ; he scorns to boast, and will not stoop to notice the scheming mountebank who is seeking to supplant him and rob him of his just dues.

I have heard a Christian minister, in a glowing description of the lovely character of the lowly Nazarene, describe him as the Great Physician ; and it was the best illustration he was able to find in his vocabulary. When the profession is understood, and the people learn to differentiate between the physician and the fraud, this estimation of the character of the physician will be universal.

Is it any wonder that the conscientious pursuit of so noble a calling makes a man purer, nobler, wiser, and better ; and that the profession sets up a higher standard of honor, and comes nearer living up to its standard, as a class, than any class of men in the world ? Is it any wonder, gentlemen, that an ignorant, bashful, timid, unworthy remnant of humanity like myself is able to stand before you and talk to you when I am aware that my words but feebly portray your true character ?

The advancement in medical science has outstripped every thing else in the world. It has astonished the world ; yet the world, outside of the profession, has not dreamed of the one-thousandth part of what medicine has done and is doing. It is useless for the wisest among them to attempt to even mention the innumerable ways in which medicine has benefited humanity. It would cause a man to become lost in amazement and be discouraged at the magnitude of his task.

Physicians are so unselfish that they never indulge in personal advertising, and never patent or copyright an invention or discovery. The results of all their labors immediately become the property of the world. As a result, the mountebank takes up some discovery made by the profes-

sion and parades it before the public as his own, and claims to be what the doctor is, and more. He bewails the ignorance and shortcomings of the medical profession. As the hypocrite is to the true servant of God, so the mountebank is to the doctor. The worst hypocrite is often a "leading member" of the church; and sometimes the most arrant quack has a diploma from a medical college.

The profession can deal very effectively with the quack in the ranks, but they are too busy, and feel that it is degrading, to notice the mountebank—opathist, Dowieite, Weltmerite, Christian Scientist, patent medicine man, etc.

The physician should fall deeply and desperately in love with his profession, and resent every pretense or insinuation of these frauds, which are insults to medicine, as he would resent an insult to his wife, mother, daughter, or sister.

In the palmiest days of Keeleyism I brought down the reproaches of the whole community upon my head by denouncing it openly as a glaring and damnable fraud. To-day who so humble as to do homage to Keeleyism?

The profession, in a sense of security, because of conscious superiority and their honesty of purpose, feel that they are invulnerable to the attacks of those ghouls, and scorn to tarnish their hands by giving them battle. They feel that it would be degrading themselves and honoring the charlatan, and, therefore, pass them by as unworthy of notice. Encouraged by the apathy of the profession, they have become bold, and to-day charlatanism, in one form or another, permeates every walk of life, undermining the very foundation of truth and honor upon which the science of medicine is built.

Gentlemen, I believe the profession has borne their slanderous attacks long enough. They do not hesitate to attack the profession through a subsidized press before the people. Our silence is taken by the people to mean a tacit confession by us that their charges are true. I believe that we have it in our power, by a united effort, to destroy the business of the charlatan. If the people understood this matter, he would have to engage in an honest pursuit or ordinary stealing, and a portion of his enormous profits would be turned into the pockets of honest men. I believe it is our duty to fight him in the public prints, if we have to hire the space as he does when he attacks us. The space devoted to our articles would be a public benefaction, while his benefits only himself and the printer.

Each physician should, at every opportunity, denounce and expose these fakes, and tell the people of something which medicine has done for the race. If he will take the pains to post himself, there is plenty to tell without lying or exaggerating ; and, when he has spent a long life in telling it, the half will not have been told, and he will thus advertise the whole profession and incidentally advertise himself as a member of the great guild.

It is perfectly useless for medical men to talk among themselves, or publish remonstrances in the medical press. It only serves to reveal their position to the wary enemy and enable the enemy the more successfully to attack them before the people.

Even the best educated classes are woefully ignorant of every thing pertaining to the science of medicine, and need educating along those lines. If the medical profession do not educate them, who will ? Those enemies of health, decency, truth, and honor have been educating them to their way of thinking, and cultivating a prejudice against the best friends of society, the medical profession, for many years, and to-day this prejudice is the greatest obstacle in the way of progress in medical and sanitary science.

A few years ago the Medical News employed competent men to investigate and report the facts about Christian Science, and published the results of their labors. These articles were sufficient to convince any intelligent man, but who read them ? Only a few physicians who needed not to be convinced. If such articles were given wide circulation in the lay press it would promote free discussion, which would disclose the truth ; and truth is the goal which medical men are seeking.

Medical men should awake to the real conditions ; cleanse and purify themselves by denouncing the thousands of quack proprietary nostrums with ridiculous manufactured names, advertised "to the profession only," and quit prescribing them, and then turn their batteries on the lesser evils of so-called patent medicines, the opathies, isms, and cisms.

We prate much of higher medical education and over-crowding in the profession. God knows we are sadly in need of the education, but if the profits of the charlatanism were turned into legitimate channels there is a paucity of physicians.

Books are written on such subjects as "The Physician as a Business Man," and there is a great deal said about his lack of business tact and sagacity. It is but too true that he is so engrossed with looking after the welfare of others that he has little time to study business methods, and

he falls prey to every kind of fraud ; but in this mercantile age, when everybody is engaged in a wild rush for the "almighty dollar," the chief danger is a departure from the fundamental principles of the profession. "What profiteth it a man if he gain the whole world and lose his own soul?" or, in other words, if he becomes a millionaire and has a guilty conscience?

There seems to be an idea among the laity that any fool can tell what the disease is, that is, make the diagnosis, but it requires something supernatural, peculiar, strange, wonderful, mysterious, or hideous, and that it must bear a strange, high-sounding, unpronounceable name if it cures the condition. This is a relic of African voodooism and witchcraft. Even our high courts can not understand that any thing is medicine except drugs or knife, and they can not be convinced that a man is practicing medicine if he uses only manipulation, faith, belts, pads, baths, etc., or sends out a ready-made preparation to be prescribed upon the diagnosis of an ignorant layman.

If a physician is plain and honest enough to reveal the fact that there are some things that he does not know, the people conclude at once that he is a benighted fool, for old "Granny Stubblefield" could tell as soon as she saw the "white" around the child's mouth that it had "worrums."

The physicians should teach the people that diagnosis is, at once, the most difficult and most important department of medicine. Get a man to understand this and he will no longer regard the doctor with suspicion and fear because he is in doubt as to his diagnosis, and it will remove the temptation of the doctor to make quackish pretenses of the possession of superior skill.

A definite plan of campaign against fraud and quackery in the name of medicine should be organized and carried out to the "letter." I am ready to join any movement that promises to better the conditions. I would suggest that every physician in the land get on his knees and, with one hand on his heart and the other on the open word of God, swear before high heaven that he never will prescribe a dose of a proprietary or copyrighted medicine while he lives. Those who are in the habit of depending upon the manufacturers of proprietary nostrums and their agents to tell them what to give their patients should cut loose from them and study pathology, diagnosis, and rational therapeutics. The physician who will do this will find himself elevated several notches in the scale of manhood and the possessor of a clear head and an approving conscience.

The profession should prepare a short history of medicine, which should be written in a style and language that would be attractive to the lay reader, and publish it extensively in the lay press, and in pamphlet form for free distribution among the people. It should also contain a history of charlatanism, both past and present, and show the rise and fall of the isms and scisms and pathies of the past, and show to the people that those of the present are the same under different names, and that Christian Science, Dowieism, Weltmerism, Osteopathy, copyrighted nostrums, and all the rest of the filthy brood are of the same ilk and were all hatched by the same old dirty buzzard of greed.

I make the prediction that men who are here to-day will live to see all those things now flourishing under various names existing only in history as relics and curiosities, proving that there is no limit to human credulity; yet, sad to relate, there rests upon the profession of medicine to-day a withering blight born of greed.

Physicians, seeing the financial success of the charlatan and forgetting their own high calling, and, perhaps, feeling the sting of poverty and neglect, and seeing that their own high ideals are constantly being shattered by an ignorant, unthinking, and unappreciative public, while those dependent upon them are in danger of suffering for the necessities of life, are tempted to adopt some of the quack's most plausible methods.

One step in the wrong direction leads on to another and another. One physician finds another guilty of this or that unethical act, and soon concludes that "they all do it;" and to-day we find thousands of them kneeling before the throne of Mammon and offering their precious sacrifices upon his altar.

A very intelligent physician said to me a short time ago that it was impossible to find a strictly ethical doctor. It was the worst shock I've had for a long time. My God! is it true? Are there not a few shining examples, exceptions to that rule? Surely there are still some honorable ethical men among us yet, only obscured by the cloud of blight that hangs over us.

One physician excuses himself with the plausible theory that he is only copying the conduct of another, when, in fact, they are all copying after the charlatan.

The first step into error, the very parting of the ways, is nine times out of ten the prescribing of copyrighted nostrums. Physicians scorn to patent or copyright any thing, yet allow the nostrum venders to gull them into prescribing thousands of worthless proprietary nostrums. These

things are sure to react, in fact, have already reacted to the detriment of the profession, and the physician has nothing like the standing in society that he once had.

Giving useless or unnecessary "treatments" to the female genitalia is another way in which some physicians cultivate one of the most fertile fields of charlatanism. With speculum, sound, and curette, much ado and ceremony they perform all sorts of wonderful nothings for many ailments, real or imaginary, and collect large fees. After the fellow's money is gone he gradually awakes to the fact that he has been "buncoed," and, of course, his opinion of medical science and medical men is not improved.

I had under my care recently a case of uterine and ovarian trouble of an insignificant character, not requiring operation, on which the husband said he had already spent \$600 in doctors' fees and for drugs, pessaries, belts, etc., with no benefit.

I once knew a doctor of high standing in his community to perform what he described to me as a thorough curettment of the endometrium; and four months later the patient was delivered of a healthy child at full term. The child, now a nice young lady, will perhaps never know how perilously near she came to being murdered by ignorance and cupidity. Is it any wonder that the husband of that lady became the disciple of charlatanism?

I have been studying medicine over thirty years, and during all that time an axiom has been poured into my ears with dogged persistence by members of the profession. It runs like this: "The people like to be and have to be humbugged, and if we don't humbug them they will get some one else to do it." I dispute it. They neither want to be nor have to be humbugged, but have learned from experience, observation, and tradition that physicians are usually honest men; therefore, if the "confidence man" can make the people believe that he is a doctor, his work is made easy.

A physician should never entertain a thought of humbugging any one, but render to the community that honorable, dignified, and valuable service for which he is peculiarly fitted. If he joins the hordes of quacks he may be sure his sins will find him out, and he will soon sink to or below the level of the common herd, with prestige and honor gone, his conscience seared, and the whole profession disgraced by his conduct.

When I think of the disgrace resting upon the profession I love so well, my heart is sad. I feel as I imagine a fond mother feels when a

lovely daughter is ruined and disgraced. My soul is filled with shame and chagrin. The mother feels that the daughter is far superior to her despoiler ; and I believe that the most unworthy physician is incomparably a better man than the blatant blatherskite who has tempted him from the path of rectitude.

As the matter now stands, it will require many years of right living to regain our lost prestige.

I would to God I possessed the voice of the thunder, and the power to clothe my thoughts in pleasing and graceful language, and the ability to keep these sentiments rolling and roaring through the ominous cloud that threatens the profession and obscures the stars in the sky of medicine until every physician in this broad land was thoroughly imbued with them. Then might we hope to see the curse of charlatanism vanish, and the physician regain his lost prestige and again become an honored and respected member of society.

MARION, KY.

PUERPERAL CONVULSIONS.*

BY T. J. TOWNSEND, M. D.

It is my province to-day to discuss the most serious and dreadful accident which can occur to the parturient woman ; that which awakens sympathy and strikes terror to the hearts of friends and relatives—puerperal convulsions.

In the management and treatment of this disease we are required to exercise discretion, coolness, and decision, with promptness of action, or else a life may go out.

What do we mean by puerperal convulsions? It means a violent, irregular contraction of muscles, or set of muscles, which are ordinarily under the control of the will. It is a disease of one or more convulsive fits, ending in coma and unconsciousness, either partial or complete.

Including the entire list of puerperal diseases, except rupture of the womb, this disease has proved the most fatal to the lying-in woman, destroying the greatest number of lives. Puerperal convulsions, as a rule, may occur any time after the sixth month of pregnancy, during labor or after labor is completed.

When a pregnant woman informs me that she has frontal headache,

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disturbed vision, irregular action of the heart, swollen limbs, vertigo, specks before the eyes, and confusion of the mental faculties, I at once infer the full meaning of such symptoms, that there can be no mistake as to the true nature of her disease ; that her condition is uremic, that she is in a state of toxemia, which, if permitted to go unbridled, without interference on the part of her attending physician, that sooner or later, in all probability, she will be assailed with puerperal convulsions.

In the majority of pregnant women albumen may be present in the urine, or it may be conspicuously absent. We can not always trust these signs as a guide to what is best to do, but we must not forget that the presence of albumen may signify much ; that it is at best a suspicious circumstance, and that we should watch the patient. Yet in the most dreadful type of puerperal convulsions neither albumen nor casts are found in the urine.

When there exists much infiltration of cellular tissues, the kidneys are at fault. Urea is gathering in the blood. In hydremic plethora, uremic conditions are ever present. The coating of blood-vessels is weakened by the presence of urea in the blood, hence the exudation of serum in the cellular structures of the body.

Pregnant women, as a rule, with few exceptions, possess a ravenous appetite for food. The pregnant state requires and demands more food ; she must supply nourishment for the growing fetus ; in excess of the quantity required for her own sustenance, two lives are fed instead of one. These women have morbid appetites, and many of them not infrequently suffer shame on account of gluttony. The consumption continuously of a large amount of food in any case is usually followed by plethora ; it is the common result of excessive eating. As a sequel, the blood becomes unduly charged with albumen, even far in excess of the requirements of nature ; not being appropriated by the plethoric mother, the task of elimination at once begins. Thirst is intensified, and the woman consumes large quantities of water ; albumen of the blood is diluted, and finds easy escape in the urine. Albuminosis, or too much albumen in the blood, is, in my opinion, the true etiological factor that leads to puerperal convulsions ; its decomposition in the blood leads to the formation of urea, and in the majority of cases of eclampsia, uremic symptoms, more or less pronounced, precede the attack of puerperal convulsions.

Albuminosis leads to albuminuria ; albuminuria leads to uremia ; uremia leads to hydremia ; hydremia leads to edema, or transudation

of serum in the cellular tissues of the body, less frequently in the serous cavities of the abdomen, the pleura or the pericardium, and perhaps the serous membranes of the brain.

In albuminosis arterial tension is pronounced, high pressure is on; there is too much blood; the heart is struggling to do its work; the circulation is impeded; organic structures are interfered with; deposits are taking place; transudation of serum is going on; delicate structures are giving way; blood changes are taking place; urea is increasing in the blood; toxins are gathering like a gathering storm.

Common sense should dictate the best terms for relief. The large intestine is the main sewer of the human body. It is five feet in length and capable of great distension; smaller vessels pay tribute to its natural source. This common sewer is filled with ptomaines, is reeking with disease germs, is sweltering with ferments. The voice of wisdom, loud as a trumpet from nature's citadel, screams in our ears, "In the name of mercy open up the sewers!" Bile is nature's anti-toxin; it possesses power to destroy ferments; quicken the liver to its greatest action, flush the intestine with this antiseptic fluid, produce copious action from the bowel, and boggy tissues are drained of toxins; uremic and dropsical conditions improve or give way, and, in many cases, good results are obtained.

When albumen accumulates in the blood out of proportion to nature's demand, its abundant presence becomes a factor for mischief, not being appropriated; its decomposition produces urea and leads to uremic poisoning. The kidneys, being composed of delicate filtering tissues, already interfered with from pressure on renal veins, become congested and inflamed; urea and other waste products are retained in the system to finally lead to eclampsia.

Puerperal convulsions occur more frequently in first pregnancies, and in women who are illegitimately in that condition. A woman who is pregnant for the first time has not had her abdominal walls distended; the womb is pressed back upon the kidneys, interfering with their normal function. The woman who is illegitimately pregnant, laces and dresses tightly in order to hide her shame. In exceptional cases women of fashion, not wishing to give up the social pleasures of life, practice the same kind of indiscretion. As a consequence the kidneys are pressed upon. This will cause puerperal convulsions.

Pressure resulting from abdominal tumors and other causes will not give rise to convulsions, because the blood is not altered as it is in pregnancy.

As to the frequency of convulsions, it is fortunately a very uncommon disease, one in every 250 or 300 cases of confinement, and for the most part in primiparæ.

Dr. Thomas, of New York, is authority for the interesting statement that seven-eighths occur in primiparæ.

Swelling of the feet, legs, face, and hands is a suspicious circumstance. These patients should be kept under constant care; their urine should be examined. But women do not always have convulsions when you find albumen in the urine. In a large proportion of cases they will not have convulsions.

The most important symptom of puerperal convulsions is a general listlessness, a dull headache on the frontal or parietal protuberance or extending back, specks before the eyes, ringing in the ears, fullness about the head, and this may occur without edema in feet, legs, or hands. When all of these symptoms are present, look out, for these are the danger-clouds; the storm-burst is close to hand.

Symptoms of approaching convulsions: Rolling of the eyes, spasmodic twitching of the face; as the convulsion proceeds, the eyes turn back, the tongue may or may not protrude; respiration is interfered with, and the woman's face becomes turgid with blood. Treatment is to accomplish delivery of the child as quickly as possible, with forceps or by version.

When you are warned by premonitory symptoms which have occurred, judicious bleeding has saved many lives; when there is edema and congestion attended with discomfort and pain, bleeding is the most potent and most reliable means for preventing and checking the disease.

When the woman is plethoric, when there is oppression in the chest, when cephalalgia is localized, when the pulse is hard and strong and full, when albumen is found in the urine, it is proper at once to bleed or purge the patient until a decided impression is made upon the pulse. This is our best and quickest remedy for relieving blood-pressure and albuminosis.

Venesection is the "lost art." The medical profession have buried it low. It belongs to the history of the past. In resurrecting its slumbering ashes for the treatment of puerperal convulsions, I would not presume on your intelligence by advocating its general use as a therapeutic agent, for it has been abused, misapplied, and abandoned. But you may place me on record as saying that for this single condi-

tion, albuminosis, venesection is an ideal remedy, and much may be expected of it. In as much as I have chosen to limit its sphere of usefulness, I shall not hope to entirely escape criticism at the hands of those who would not dare to use it on account of public opinion. Bleeding, purging, and starving are handmaidens, and have accomplished permanent good in treatment of this disease.

Medicines which will restrain vascular excitement are very good: veratrum viride, aconite, rectal injection of thirty to forty grains chloral-hydrate gelseminum. But these agents do not relieve the cause. The proper treatment is to drive the enemy from its trenches, unload the distended colon, drain the system of impurities, and avoid further systemic poisoning.

As a purgative, senna tea, Epsom salts, Rochelle salts, protoiodide of mercury. It is my custom to purge the patient freely; to have her abstain *entirely* from animal food. This includes milk, eggs, etc. The use of coffee should be interdicted, as this class of patients are strangely sensitive to its stimulating effects. Coffee causes insomnia, nervousness, mental confusion, palpitation, dyspepsia, headache. It is a cerebro-spinal stimulant, and leads to feverishness, oppression of the chest, ringing in the ears, vascular excitement, and congestion of the kidneys. Caffeine exalts reflex excitability, and produces tetanus in dogs, cats, rats, and rabbits. Coffee is unsuited to uremic patients.

Warm baths, proper clothing, and moderate exercise are of the utmost importance. Avoid mental excitement, late hours, and a heated room. In extreme plethora, Lord Byron's diet, consisting of bread crusts and water, is quite appropriate, being the logical treatment for albuminosis in plethora. I can not conceive a more inappropriate diet than to feed a plethoric pregnant woman milk. It leads to serious mischief by increasing blood-pressure. When the urine is heavily charged with albumen, when cephalalgia is persistent, and every symptom is pointing to a fatal termination, it is my plan to recommend premature labor, which will relieve the pressure exerted upon the kidneys and other organs.

This brings us to a condition which is co-existent with pregnancy—it is structural disease of the kidney. Women who have Bright's disease may become pregnant; crude casts and renal epithelium in the urine make it difficult to tell whether it is kidney disease or if it is due to pregnancy. Advanced pregnancy offers impediment to the circulation of the blood, and brings about congestion of the kidney from pressure exerted on the renal veins.

How does a woman die when attacked with puerperal convulsions? She may die from exhaustion, caused by the rapidity with which the convulsions come on. In the violent form, she may die from apoplexy, caused by pressure upon the jugular vein; she may die from asphyxia, the result of spasm of the glottis; pulmonary and cardiac serous effusion; effusion upon the brain, coma, cerebral congestion; spasm of the heart, of this they die instantaneously.

Children die from violent pressure exerted by the womb and abdominal muscles, or they may die from toxemia.

The most satisfactory, the most potent and immediately effective means for arresting puerperal convulsions is to give, hypodermatically, one half or one grain morphine, preferably the larger dose, it being the best; time is then afforded for making more elaborate preparations for taking the child from its mother. If the head comes within reach of the forceps, it is best to evacuate the uterus at once. If the neck of the womb is not dilated, introduce Barnes' dilator, larger ones successively (in the absence of Barnes' dilator, two condoms, one within the other to insure strength, attached to a Davidson syringe, answers well, and is a good substitute dilator), and pump full of hot water, or it may be necessary to dilate with fingers and hand, and seize the child by the feet, performing version. It is proper to not attempt too speedy delivery; the child's hips wedged within the cervix, it is time to halt and trust to nature to expel the child. Undue traction will cause the child's arms to slide upward about the head, thus offering serious impediment to its passage through the pelvis.

Before concluding these remarks, it may be proper to include other causes which operate to excite convulsions in the child-bearing woman, not of the uremic kind. A rigid, contracted cervix uteri; small pelvis through which the child makes slow progress under heavy pressure; severe, prolonged, ineffective pains, and the unyielding perineum; these are frequent causes of convulsions of the less serious kind.

A woman may have hysterical fits in childbirth; she may have epilepsy. In rare cases alcoholic poisoning has produced fits.

OWENSBORO, KY.

THE USE OF THE NORMAL SALINE SOLUTION.*

BY C. H. TODD, M. D.

It is well known that the normal saline solution has been generally accepted by the surgeons of the world as the most valuable remedy in the treatment of hemorrhage and shock, and now the general practitioner is beginning to learn that in certain conditions of almost every disease it is equally as valuable.

The causation of disease is of interest to the scientist and physician, but the patient is more interested in the remedy which gives relief; so the germ causation of disease, like many other theories, will be relegated to the past, because it fails to provide a remedy.

The cause of disease is of deep interest to the student, but the world at large will ever appreciate a simple remedy that can be applied by the local physician under any circumstances.

Physiology teaches that the human body is composed of water and basic salts, and physiology we believe to be the only key to scientific medicine, and it is only by this physiological light that we hope to understand what relation the arterial blood has to physical life and to cell life.

Nature is a marvelous provider; it first creates a need and then supplies the demand of the need, and salt, being essential to animal and vegetable life, is found in solution in the oceans and salt lakes, or as a solid in the earth.

The animal is led by instinct to seek salt wherever it is to be found, and the human being, unless sufficiently provided with salt, will be found not only lacking in physical vitality but a prey to wasting diseases. The average human being requires an annual supply of twenty pounds of salt.

In the Eastern countries leprosy and other wasting diseases are supposed to prevail from the lack of salt, and the physician, who is recognized as the protector of the human race from disease, has left the investigation of this subject to the lay scientists, and as a profession have we a right thus to delegate our duty to others?

It has been clearly proven that the disease-resisting power of blood-serum depends on the proportion of sodium chloride it contains, and

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the same power, if lost by abstraction of the mineral, can be restored by adding the same to the serum.

The sudden relief given to the patient by the injection of the normal saline solution naturally suggests a desire to understand more fully its *modus operandi*, for it is evident that a molecular movement has taken place, and the sympathetic nervous system, ever watchful, has aroused the nervous system and cell life, and is now ready to absorb what has been lost by hemorrhage, shock, or disease, and restores vitality in a molecular manner, thus putting the system in a condition to react to health. The use of the normal saline solution is no longer an experiment but an established therapeutic remedy, and no other remedial agent can take its place.

The time allotted for the reading of my paper is too brief for thorough presentation which a subject of such importance and wide range demands, so I will confine myself to a definition of the normal saline solution, its mode of use, and clinical report of cases.

The normal saline solution contains 44 grains of chloride of sodium to one pint of water (6 per cent solution), or 51 grains of the salt to the pint of water (7 per cent solution), either of which can be used, but for all practicable purposes a small teaspoonful of salt added to one quart of water will answer the purpose, using sterilized water at a temperature of 110° or 112° F., which has been boiled and strained. Its mode of use can be by enema, subcutaneously, or intravenously.

Not less than one quart of the solution, warm, should be used, and repeated in one to two hours as the conditions demand, for there is no danger, as it can be used in quantities of six times the volume of the blood before producing death by plethora, one tenth of the weight of the body being blood.

While the intravenous infusion of one quart of the normal saline solution in disease will restore the patient to health, the injection in the same way of one quart of plain water in a healthy person will produce death.

CASE 1. Pneumonia. Male, age sixty-three; twelfth day of disease; pulse 150 and hardly perceptible; cold sweat; apparently moribund. In fifteen minutes after the subcutaneous injection of one quart of the normal saline solution the pulse was 130 and full, skin warm, and face flushed. In twenty-four hours the patient relapsed, and in a few minutes after using one quart of the solution by enema he rallied promptly, and in twenty-four hours from that time was convalescent.

CASE 2. Marasmus. Female, age eighty-seven; patient almost pulseless; skin cold; mind clear. After the use of one quart of the solution by enema the pulse at once filled out and the skin became warm. These symptoms recurred at intervals of every three or four days, and treatment repeated with same effect for four weeks. The patient died.

CASE 3. Cirrhotic liver. Male, age thirty-nine; pulse ~~160~~ and weak; skin cold. After using one quart of solution by enema pulse quickly filled out and slowed down to 120 beats, and skin became flushed. The patient relapsed every two or three days for twelve days, and enema repeated each time with good effect. Patient died.

CASE 4. Placenta previa. Multipara, age thirty-six. In thirty minutes after termination of third stage of labor patient pulseless and apparently moribund. One quart of solution was used by enema, and in fifteen minutes the pulse filled out and color returned to face, and patient was soon out of danger.

CASE 5. Acute dysentery. Female, age twenty-seven. Pulse 160 and weak; skin cold and cyanotic. One quart of solution used by enema, and in thirty minutes pulse 120 and skin warm. Enema repeated every four to eight hours, and patient safely convalescent in thirty-six hours.

CASE 6. Typhoid fever. Male, age thirty. On twentieth day profound intestinal hemorrhage; pulse rapid and hardly perceptible; skin cold and blanched. One quart of solution used subcutaneously, and in a few minutes pulse filled out and color returned. In twelve hours the hemorrhage returned, but not so severe; pulse 140 and weak; skin cold; subcutaneous injection of solution repeated, and promptly pulse slowed down to 115 beats; color returned and patient convalesced.

CASE 7. Puerperal septicemia. Multipara, age thirty-four. On the eighteenth day, morning temperature 97° and evening 105°; pulse 145 and very weak; skin cold. This condition had existed for three or four days. One quart of solution was used by enema, and continued every four to eight hours for two days. Morning of first day, temperature 100°, and evening 102°; morning of second day, temperature 99° and evening 100°; pulse 85; skin warm. Patient convalesced.

Having observed in my own practice and read in medical literature how quickly the normal saline solution thrown into the rectum will bring about a reaction, the mind naturally seeks to discover how this reaction is brought about in so brief a time. It is not reasonable to believe that such a volume of fluid could have been absorbed so

hurriedly, therefore we seek for an answer elsewhere, and it is to be found in the chemical affinity of the blood and nervous system and cell-life itself for an alkali, which brings about this explosion, termed molecular action.

The use of the normal saline solution is attracting universal attention over the world, and at present certain infectious diseases are being treated by this method in France, and the profession are anxiously awaiting a report of these investigations.

The human organism is like a palace with electric bulbs in every room, and all connected by one wire with the dynamo; touch the button at the front door, there is an explosion, and the little bulbs light up the whole palace! Thus it is when the normal saline solution is injected, there is an explosion, and instantly every cell in the body is aroused, revived.

OWENSBORO, KY.

ACUTE ORCHITIS.*

BY W. H. HARDESTY, M. D.

No doubt you gentlemen present have often observed a failure on the part of the physician to differentiate between acute orchitis, acute periorchitis, and acute epididymitis.

Acute orchitis may be defined as an inflammation of the testicle proper. The testicle may be attacked primarily, or it may be secondarily affected by invasion from some remote or neighboring organ. The disease may be either local or diffused.

Etiology. Orchitis may be traumatic, idiopathic, or due to the extension of some specific or non-specific disease along the cord, propagated from disease of the bladder, urethra, or seminal tubules. It may be found in ectopia testis, where the gland is placed in the perineum or cruro-scrotal fold. Contraction of the cremaster muscle, thereby causing the organ to be pressed against the external abdominal ring, may give rise to this trouble. There may be anomalous distribution of the cremaster loops, which could thoroughly basket or encircle the testicle, and any irritation capable of causing contraction of sufficient frequency and strength would inflame the organ. Metastatic, or, to use the term of Ziegler, hematogenetic causes, such as mumps, syphilis,

*Read before the Ohio Valley Medical Association, at Henderson, Ky., November 12, 1901.

typhus abdominalis, and allied troubles are to be included among the etiological factors. Rheumatism and gout are factors worthy of consideration, though their causative influence is denied by some authorities. However, atrophy of the testicle sometimes occurs during and after an attack of rheumatism or gout, which, to my mind, goes far to maintain the truth of this statement. There are attacks of orchitis which come on without any apparent cause.

Fleming reports a case in a child fourteen days old, otherwise perfectly healthy, in whom an acute and painful swelling of the testes about the size of a hen's egg occurred. There was a protrusion from the scrotum and loss of a mass about the size of a walnut, which ended in restoration of the normal function.

Cases of the latter class are reported as accompanied by sudden abscess formation, with or without fungous testes. Of the hematogenous causes, mumps heads the list as the most frequent. Gonorrhea may cause orchitis, but not frequently, as the latter usually is a sequel to gonorrheal epididymitis.

Under the head of traumatic influence in the production of orchitis may be included operations upon the urinary tract, as for fistulæ, evacuation of hydrocele or hematocele, the use of the catheter, particularly in the aged; and lastly, as not an infrequent cause, may be mentioned repeated and prolonged sexual excitement, especially if ungratified.

Gross Changes. The skin of the scrotum is tense, smooth, and slightly reddened; the superficial veins are distended, and sometimes in severe cases become tortuous. The organ is smooth and regular in outline, and in size varies from that of a walnut to a goose egg; in almost all cases the increase in size is manifest by inspection. There is no change in the shape of the organ, and the increase is slow and steady; in some instances there is a sense of fluctuation, but fluid is seldom found in the vaginal cavity.

Symptoms. The disease is generally ushered in by a feeling of weight, uneasiness, and extreme sensitiveness about the parts. This increases and grows into very acute pain as the inflammation progresses, and at this time is more especially referred to the suprapubic region when the bladder is distended. Infection of the lumbar retroperitoneal glands is marked by a tender point in the loin or by pain extending the full length of the lumbar region on the affected side. The pain continues from two days to a week, or longer, after which it becomes gradually less, until nothing is left except a little soreness

upon touch. Generally there is a slight rise in temperature, though in severe cases the pyrexia may go as high as 104° F. There is commonly loss of appetite; nausea, vomiting, hiccough, and constipation are not uncommon. The reflex symptoms, which are variable, may simulate strangulated hernia, especially if associated with ectopia testis.

If suppuration takes place, softening ensues, the skin breaks down, and pus is discharged externally. The abscess cavity usually heals quickly. If the process has destroyed a great deal of the intertubular structure the seminal tubules prolapse and may be observed at the opening of the cavity, bathed with discharging pus.

The disease varies greatly in intensity. A mild case may be the result of extensive injury or even virulent gonorrhea, while the worst cases reported may follow a slight injury or non-specific urethritis. Cases which attack the center of the gland and suppurate cause most pain and an exaggeration of other symptoms out of all proportion to the amount of inflammation present. This is due to the greater amount of peripheral tissue resistance offered by the uninvolved gland itself, and its serous and fibrous tunics.

Differential Diagnosis. To differentiate between acute orchitis and periorchitis serosa is sometimes difficult. Transparency is suggestive in the latter but is not always a feature, though when present it is more or less conclusive proof. The appearance and consistency of the skin are more determinate. The skin over an inflamed testicle is stretched; it may be reddened and the veins distended.

In periorchitis fluctuation with inflammatory changes in the skin are observed, and the tumor is not so hard and heavy. When evidence points in the direction of fluctuation an aseptic puncture with a hypodermic syringe will determine whether or not the tumor is hydrocele, hematocele, or abscess. Pain in the groin and loin of the affected side may be felt, both in orchitis and epididymitis.

Pain in the groin is a prominent prodromal symptom of epididymitis, but is not so constant and severe in orchitis. It is relieved by the recumbent posture in both. Pain in the loin is constant in orchitis, and is not relieved by the dorsal decubitus. Pain referred to the testicle in orchitis is not relieved by rest on the back and elevation of the testicle, while in epididymitis great relief is obtained.

In orchitis the shape of the tumor is uniform and smooth, while in epididymitis it is larger, more angular, and irregular in outline. Pain

produced by palpation in either orchitis or epididymitis is felt only in the part of the organ inflamed. This is a reliable sign. The character of pain is a distinguishing feature. In orchitis the pain is of a stretching character, while in epididymitis it is as if produced by pressure.

Treatment. Rest in bed, with the testicle supported and elevated by means of a suspensory, pillow, diaper, or four-tailed bandage. Morphine should be given in sufficient quantity to relieve pain; all kinds of poultices, so long as heat is maintained, are more or less serviceable. Cold applications are often effective in the early stage, but they should be employed with great caution in the old. Old-fashioned tobacco poultice, or Scotch snuff, glycerine, and hot alcohol act well. The bowels should be cleared by a full dose of calomel, followed by some saline.

If absorption of the inflammatory deposit is slow, it may be hastened by stimulating application to the scrotum, massage, strapping, and a suspensory. When temperature is high, aconite veratrum viride or a coal-tar product may be given with good result.

WAVERLY, KY.

Reports of Societies.

OHIO VALLEY MEDICAL ASSOCIATION.

Stated Semi-Annual Meeting, Held at Henderson, Ky., November
11 and 12, 1901.

The meeting was called to order by the President, C. B. Graham, at 11 A. M. November 11th. The reports of the committees were called for. Dr. J. W. Stone made a report for the Committee on Arrangements, which was received and filed.

Dr. M. F. Coomes, of Louisville, read a paper on "Plastic Surgery of the Face," which was discussed by Drs. A. M. Hayden, Horace Whitacre, C. H. Johnson, Ben. L. H. Floyd, D. S. Reynolds, S. Lambert, J. N. McCormack, and R. L. Moss.

Dr. W. H. Hardesty read a paper on "Acute Orchitis," which was discussed by Drs. S. Lambert, J. W. Stone, A. J. Leiber, Arch Dixon, Ben. Floyd, T. J. Townsend, W. L. Dixon, S. L. Henry, and C. B. Graham.

Dr. James H. Letcher presented a clinical case through Dr. L. Cottingham, with history of gunshot wound of the skull. The case was a very interesting one and was carefully examined by several members, Dr. Coomes recommending the use of the X-rays as a means of diagnosis.

Dr. Charles W. Hartloff read a paper on "Clinical Microscopy: Its Value and Limitation in Private Practice," which was discussed by Drs. Arch Dixon, Edwin Walker, D. S. Reynolds, W. R. Blue, and H. J. Whitacre.

Dr. T. J. Townsend read a paper on "Puerperal Convulsions," which was discussed by Drs. J. W. Stone, S. L. Henry, T. J. Shoemaker, Ben. Floyd, and S. Lambert.

Dr. C. H. Todd's paper, "The Use of Normal Salt Solution," was discussed by Drs. J. H. Letcher and D. S. Reynolds.

Dr. Dudley S. Reynolds read a paper on "Catching Cold," which was discussed by Drs. J. A. Humphrey, C. H. Johnson, Arch Dixon, T. J. Shoemaker, T. A. Frazer, J. T. Townsend, J. N. McCormack, W. R. Stevens, and C. B. Graham.

Dr. M. L. Heidingsfield read a paper on the "Diagnosis of Syphilis," which he illustrated with lantern slides. Dr. W. R. Blue discussed the paper.

Dr. Horace Whitacre read a paper on "Treatment of Infectious Wounds of the Hand." This was also illustrated with lantern slides.

Dr. H. T. Dixon read a paper, the title of which was "A Few Things I Know." This paper was discussed by Drs. F. A. Frazer, S. L. Henry, W. J. J. Paris, J. C. Mosely, and J. W. Stone.

Dr. W. J. J. Paris read a paper entitled "A Plan of Campaign," which was discussed by Drs. F. A. Frazer, S. L. Henry, L. A. Humphrey, and M. F. Coomes.

Dr. L. D. Brose read a paper on "Diseases of the Eye, Ear, Nose, and Throat as Sequelæ of Typhoid Fever." This paper was discussed by Drs. Cheatham and Ben Floyd.

Dr. R. H. Moss read a paper on "Carcinoma of the Breast," which was discussed by Drs. J. A. Humphrey, J. J. Reichstein, Arch Dixon, and F. A. Frazer.

Dr. J. J. Reichstein read a paper on "Medullary Narcosis, with a Report of Two Cases." The discussion of the paper was opened by Dr. William A. Hanna, who was followed by Drs. Arch Dixon, J. A. Humphrey, T. J. Shoemaker, and William A. Quinn.

Dr. Arch Dixon read a paper entitled "Some Notes on Tuberculosis Gathered in England," which was discussed by Drs. Ben Floyd, J. A. Humphrey, and J. W. Stone.

Dr. J. A. Humphrey's paper on "The Endometrium" was read by title.

Dr. S. S. Amerson read a paper on "Septic Infection of the Puerperium," which was discussed by Drs. W. A. Richards and W. J. J. Paris.

The following gentlemen were nominated and elected to membership: Drs. W. N. Wishard, L. O. Jones, T. P. Gray, L. Lambert, Ben. L. H. Floyd, L. Cottingham, Charles W. Hartloff, M. L. Heidingsfield, W. H. Nunn, P. C. Reitz, Edwin Walker, H. J. Whitacre, C. H. Todd, W. R. Stevens, —. Ravdin, Dudley S. Reynolds, J. J. Reichstein, A. L. Denton, M. F. Coomes, W. Cheatham, W. R. Blue, L. D. Brose, R. H. Willingham, and O. E. Cottingham. Dr. J. N. McCormack was elected an honorary member.

A vote of thanks was tendered the officers of the Association for the interesting programme which they had prepared and carried out.

To the Y. M. C. A. was also tendered a vote of thanks for the use of their hall.

Owensboro was selected as the next place of meeting, and the time the first Thursday and Friday in May, 1902.

Reviews and Bibliography.

The Principles of Hygiene. A Practical Manual for Students, Physicians, and Health Officers. By D. H. BERGEY, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Octavo volume of 495 pages, illustrated. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$3.00 net.

According to the preface, this book has been prepared to meet the needs of students of medicine in the acquirement of a knowledge of those principles upon which modern hygienic practices are based, and to aid physicians and health officers in familiarizing themselves with the advances made in hygiene and sanitation in recent years. The book is based on the most recent discoveries, and represents the practical advances made in the science of hygiene up to date.

The author has dealt fully with the subjects of heating and ventilation, water and water supplies, disposal of sewage and garbage, food and diet,

etc. The book is well written, and the author shows that he has a clear knowledge of the subjects discussed. Hygiene and sanitation are bound to play an important part in the practice of modern medicine, and hereafter it will be necessary for physicians and students of medicine to be thoroughly acquainted with these subjects.

This book will be of great aid to any who may seek such clear and comprehensive knowledge as is demanded in the practice of modern medicine. The author can not be too highly complimented for the stand he has taken in the use of the metric system throughout the entire work, the system which has been adopted by the United States and all other civilized countries on account of its simplicity.

Operative Surgery. By JOS. D. BRYANT, M. D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Women's Hospital and Manhattan State Hospital for the Insane; Fellow of the American Surgical Association; former President of the New York Academy of Medicine; President of the New York State Medical Association, etc. New York: D. Appleton & Co. 1901.

The second volume of this most excellent work is in every way an ideal book. The entire work has been rewritten, and much material that is absolutely new has been added. Particularly is this true of the chapters on the brain and nervous system, the abdominal operations, and visceral surgery. The text is fresh, clear, and conspicuous for its simplicity. The illustrations are profuse, many of them in colors, and by their number and the clearness of their execution, they render effective aid in obtaining a grasp of the subject.

Volume II treats of operations on the mouth, pharynx, nose, esophagus, viscera connected with peritoneum, operations on anus and rectum, on thorax and neck, on the urinary bladder, on the scrotum and penis, and, finally, miscellaneous operations.

The book contains eight hundred and twenty-seven illustrations, forty of which are colored. We commend it to our readers as being one of the best works on operative surgery in the English language, and predict for the book a large and rapid sale.

Nothnagel's Encyclopedia of Practical Medicine. Edited by ALFRED STENGEL, M. D., Professor of Clinical Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital. Philadelphia: W. B. Saunders & Company.

It is universally acknowledged that the Germans lead the world in internal medicine; and of all the German works on this subject, "Nothnagel's Encyclopedia of Special Pathology and Therapeutics" is conceded by scholars to be without question the best system of medicine in existence. So necessary is this book in the study of internal medicine that it comes largely to this country in the original German. In view of these facts, Messrs. W. B. Saunders & Company have arranged with the publishers

to issue at once an authorized edition of this great encyclopedia of medicine in English.

For the present a set of some ten or twelve volumes, representing the most practical part of this encyclopedia, and selected with especial thought of the needs of the practical physician, will be published. The volumes will contain the real essence of the entire work, and the purchaser will therefore obtain, at less than half the cost, the cream of the original. Later the special and more strictly scientific volumes will be offered from time to time.

The work will be translated by men possessing thorough knowledge of both English and German. Each volume will be edited by a prominent specialist on the subject to which it is devoted. It will thus be brought thoroughly up to date.

The American edition will be more than a mere translation of the German; for, in addition to the matter contained in the original, it will represent the very latest views of the leading American specialists in the various departments of internal medicine. The whole system will be under the editorial supervision of Dr. Alfred Stengel, who will select the subjects for the American edition, and will choose the editors of the different volumes.

Unlike most encyclopedias, the publication of this work will not be extended over a number of years, but five or six volumes will be issued during the coming year, and the remainder of the series at the same rate. Moreover, each volume will be revised to the date of its publication by the American editor. This will obviate the objection that has heretofore existed to systems published in a number of volumes, since the subscriber will receive the completed work while the earlier volumes are still fresh.

The usual method of publishers, when issuing a work of this kind, has been to compel physicians to take the entire system. This seems to us in many cases to be undesirable. Therefore, in purchasing this encyclopedia, physicians will be given the opportunity of subscribing for the entire system at one time; but any single volume or any number of volumes may be obtained by those who do not desire the complete series. This latter method, while not so profitable to the publisher, offers to the purchaser many advantages which will be appreciated by those who do not care to subscribe for the entire work at one time.

This American edition of Nothnagel's Encyclopedia will, without question, form the greatest system of medicine ever produced, and the publishers feel confident that it will meet with general favor in the medical profession.

Transactions of the Southern Surgical and Gynecological Association. Volume XIII, Thirteenth Session, held at Atlanta, Ga. 1900. Published by the Association. 1900.

This volume shows that the society is fully alive to the needs of the hour, and is doing excellent work. It is one of the most active surgical and gynecological societies in the United States.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College, etc. Volume II, Electrotherapy, by GEORGE W. JACOBY, M. D., Consulting Neurologist to the German Hospital, New York City; to the Infirmary for Women and Children, etc. In two books: Book II, Diagnosis; Therapeutics. Illustrated. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa. Price, eleven volumes, \$22.00 net.

The second volume of this unique book is now before us. We say unique because it is arranged so entirely different from any work of similar nature, and we think very much to the advantage of those who expect to make use of it. Chapter II is devoted to electricity as a therapeutic agent. All the details of the methods and the manner of handling the current are fully and clearly set forth by the author in such a manner that no one can fail to comprehend them. It is certain that if the profession understood more about the handling and uses of electricity it would be used more extensively than it is now. Many physicians think they can not manage any better with a regular current. This is a mistake, and doctors who fail to realize the value of electricity in therapeutics undoubtedly deprive their patients of many benefits that they could otherwise obtain by means of the properly used electric current. This excellent book will soon ingratiate itself into the good graces of the profession, as it is only necessary to glance through its pages to appreciate its value.

Principles of Surgery. By N. SENN, M. D., Ph. D., LL. D., Professor of Surgery in Rush Medical College in Affiliation with the University of Chicago; Professorial Lecturer on Military Surgery in the University of Chicago; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; Surgeon-General of Illinois; late Lieutenant-Colonel of United States Volunteers and Chief of the Operating-staff with the Army in the field during the Spanish-American War. Third edition. Thoroughly revised, with 230 wood engravings, halftones, and colored illustrations. Royal octavo. Pages xiv—700. Extra cloth, \$4.50 net; sheep or half-russia, \$5.50 net; delivered. Philadelphia: F. A. Davis Company, Publishers, 1914—16 Cherry Street.

Dr. N. Senn needs no introduction to the medical profession in either this or the old world, and any fulsome praise that might be bestowed upon this excellent book would make no impression upon the professional public. Dr. Senn has given us an ideal book upon the principles of surgery. It deals with the details of the preparation of tissue, which after all is the ground-work and foundation of surgery. The book is well written, and the style is exceedingly agreeable. It is one of the most thoroughly up-to-date books now in the English language, and we need to say nothing more than there is none better and that the purchaser of this book will always find it to be just as it is represented to be, namely, a first-class and an ideal work on the principles of surgery.

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ERNEST G. MARK, A. B., M. D., and JOHN R. WATHEN, A. B., M. D., Assistant Editors.

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TETANUS RESULTING FROM VACCINATION.

We had scarcely recovered from the surprise of tetanus following the injection of anti-diphtheritic serum in St. Louis, when it was announced that tetanus had followed vaccination in New Jersey. Both of these accidents are to be deplored, and especially the latter, because of the comparative harmlessness of vaccination and its prevention of so loathsome a disease as smallpox, which at present is epidemic in many parts of the country. Further, we have to contend with the anti-vaccination sect, which I regret to say is made up in part of members of the medical profession. It seems to be questionable as to whether the tetanic germs were in the vaccine virus or whether they found their way into the wounds from other sources, as from the clothing and the want of proper cleanliness at the time of vaccination. It is certainly a great calamity that tetanus should follow vaccination, for there is nothing more certain in the whole history of medicine than that proper vaccination is a preventive of smallpox, and this accident will place many barriers in the way of preventing and stamping out this loathsome disease. However, if it can be ascertained that the tetanic germ was not in the virus and that it did find its way into the wound through some other source, then the normal equilibrium of public sentiment concerning vaccination may be regained, otherwise it will be a long time before the timidity of the people will allow them to consent to be vaccinated. Of course the anti-vaccination set will double their energies and make a desperate effort to prevent anybody from being vaccinated, and will doubtless find many adherents.

KENTUCKY SCHOOL OF MEDICINE.

The next annual session of the Kentucky School of Medicine will begin on January 2d, under the most favorable auspices in the history of this grand old institution. While the school has always been renowned for its thorough equipment, excellent teachers, and the character of work done, it is now in a far better condition for the best quality of modern scientific work than at any time in its history. With the large hospital adjoining the college, where the latest modern methods in clinical work are demonstrated before the class, with the perfectly equipped laboratories and many other facilities, the student who graduates from this school should be thoroughly prepared to practice his profession.

Current Surgical and Medical Selections.

METHYLENE-BLUE IN URETHRITIS.—It is best given in gelatine capsules in one-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind. Oil of sandalwood is a desirable adjuvant because of its diuretic action and also on account of its sedative effect upon inflamed mucous membrane. Recent observations show that, when given internally, methylene-blue reappears unchanged in the urine within two hours. By giving four one-grain doses of methylene-blue daily there is always enough of it in the urine to kill all the germs it comes in contact with. This is irrigation "from above," irrigation, not of the urethra alone, but of the entire urinary tract. By this method of irrigation there is no danger of forcing the infection into remote recesses of the genito-urinary organs.

Troublesome gastric symptoms sometimes follow the administration of the methylene-blue of the shops, but, with the following formula put up in elastic capsules, uniformly satisfactory results have been personally obtained:

R Methylene-blue, 1 grain.
 Oil of nutmeg, 1 drop.
 Oil of sandalwood, 2 drops.

The above formula should not be used for more than ten days without intermission, and while giving it the patient should be instructed to drink freely of water.—*The Medical Times.*

STRICTURE OF THE ESOPHAGUS.—While the diagnosis of this condition is usually to be easily and satisfactorily made by means of the esophageal bougie, the use of this instrument is sometimes inadmissible, owing to suspected aneurism of the aorta, hematemesis, the weakness or disinclination of the patient, etc. Under such conditions a method described by Holzknecht (*Deutsch. med. Woch.*, September 6, 1900) is likely to be of great value, as it gives accurate information regarding the presence, locality, caliber, and length of a possible stricture in a simple and painless way that is free from all risk. On illumination of the chest by means of an X-ray tube placed below the right shoulder and with the fluorescent screen arranged so that the line of sight runs from the left behind, forward and to the right the esophagus is visible as a light streak occupying the position between the dark masses of the heart and the vertebral column. On giving the patient a small quantity of water holding in suspension 15-30 grs. of subnitrate of bismuth, if a stricture be present, the fluid will be arrested at this point and a precipitation of the metallic powder takes place, which will throw an appreciable shadow on the screen. This test is mainly useful in stenoses of small caliber, and if it prove negative, the bismuth should be enclosed in a capsule, and the process of deglutition observed as before. If this, too, fails, it may be well to repeat the experiment, having preceded the administration of the capsule by the giving of a small morsel of bread, which is sure to be arrested and so impede the progress of the test object. *Medical News.*

PROLAPSUS OF THE RECTUM IN CHILDREN.—Custom says (*Annals of Surgery*) that all cases of true prolapse of the rectum will show a tumor projecting out of the anus. At the base of the tumor will usually be found a sulcus between the mucous membrane of the prolapsed gut and the skin of the anal orifice. In almost all cases the lumen of the gut may be seen in the center of the tumor. There may be inclusion of the peritoneum in cases of prolapsus, but this occurrence is fortunately rarely met with. One of the most important causes of prolapse is infection, whether produced by a retention of the feces or by diarrhea. This applies, of course, to young children. In older children and adults the prolapsus is often due to the presence of a polypus, an ulcer, hemorrhoids, or some other lesion of the rectum. The judicious use of a rubber rectal plug to keep the prolapse reduced, cleanliness, and tonic treatment with the use of strychnin, will probably give the best of results. Polypi, hemorrhoids, or other local lesions will require a surgeon's care; irreducible or constricted prolapsus will have to be resected. Mikulicz first cuts through the outer intestinal tube in its anterior circumference, catching up each bleeding vessel as it appears and ligating it with fine catgut. As soon as the peritoneal pouch has been opened its interior is examined for the presence of small intestine. The peritoneal cavity is then closed by a running suture. The anterior aspect of the internal intestinal tube is cut through little by little until it is opened, and then both intestinal

tubes are united by deep silk sutures to the entire line of the incision. The posterior surface of the prolapsus is treated in absolutely the same way, both intestinal ends being united by means of silk sutures. He simply covers the line of sutures with iodoform, places a strip of iodoform gauze over this, and then a wood wool cushion. Daily irrigation with a mild antiseptic solution should be used, opium given internally for a week, and the patient kept upon a diet leaving little intestinal residue. The results of operation are usually excellent.—*The American Journal of Obstetrics.*

SURGERY IN THE PRESENCE OF SUGAR IN THE URINE.—Fisk (*Annals of Surgery*) reports a number of cases in which he operated successfully in the presence of sugar in the urine. He reviews the literature of the subject and draws the following conclusions: The presence of glycosuria in those individuals who may have surgical diseases does not in itself constitute an absolute contraindication to any and all surgical relief. Very great judgment must be exercised in the selection of cases, in the determination of the kind and extent of the operation to be performed, and the strictest surgical asepsis must be rigidly enforced throughout. Infection, when it occurs, is from without, and is the result of an error in technique; it thus happens the constitutional symptoms become more serious and out of all proportion to the local, generally ending in death. When infection does not occur the operative wounds heal kindly, but slowly, especially granulating wounds. The vascularity of the tissues must be interfered with as little as possible, so that every operation should be planned with this object in mind. This is particularly so in gangrene of the extremities, in which the statistics of Heidenheim, Kuster, and Smith and Durham show most conclusively the necessity of high amputations in these conditions. He is of the opinion that it is better to cut down upon and ligate the artery in gangrene of the extremities rather than to attempt the bloodless amputation by means of the Esmarch band, because of the possible harm to the tissues, especially the blood-vessels, whose vitality is not the best.—*American Journal Medical Sciences.*

MEASLES AND ITS TREATMENT.—M. P. Hatfield. (*The Medical Standard.*) In an article on the general subject are the following directions for quarantine and treatment: The disease is highly contagious from its very onset. The contagion does not appear to possess the vitality of scarlet fever, for its potency is short-lived, and does not persist in infected clothing, books, and rooms as do the germs of scarlet fever; but, on the other hand, fewer children escape than in the case of scarlet fever. The entire course of an uncomplicated case of measles from exposure to recovery ought not to exceed three weeks, though it is safer to allow four weeks for quarantine. When there is persistent bronchitis, pharyngitis or discharge from the ear or nose, the quarantine should be continued until the complication ceases. It should be remembered that measles is highly contagious from the very

beginning of its catarrhal symptoms, and its contagiousness seems to be in direct proportion to the severity of the catarrh and its persistence. Quarantine is not usually long enough.

The chief duty is to keep patients warm in bed and watch for threatened complications. There is a great dread of cool drinks during the feverish stage, but the author has never seen any ill-effects from allowing cool—not iced—lemonade or flaxseed tea with lemon. A temperature of 103° to 104° , with accompanying headache, can be greatly alleviated by two- or three-grain doses of phenactin or lactophenin.

If necessary, minute doses of codein may be given to relieve the harassing cough. Cod-liver oil with syrup of iodid of iron should be used wherever enlarged bronchial lymph nodes are suspected, and persisted in until the tendency to recurrent colds is overcome.—*Archives of Pediatrics.*

THE PATHOLOGY OF TUBAL PREGNANCY.—MAX, Herzog, Chicago (in American Journal of Obstetrics), says: As to the cause of tubal pregnancy, inflammatory diseases of the tubes and uterus must be entirely discarded; nor is the etiology uniform for all cases. Congenital anomalies of the tubes, due to a faulty development of the Mullerian ducts, are responsible for a certain proportion, and likewise as important a cause is the unduly marked participation of the tubal mucosa in menstruation. This menstrual condition of the tube may be so intense as to cause a hematosalpinx, and the menstrual change offers just the soil for the lodgment of the ovum. The histology of the early placenta fetalis is the same as in uterine gestation. The amnion is considered a serous membrane, with an endothelial instead of an epithelial lining. The chorion and villi are covered by the layer of Langhans and the syncytium, the latter being considered of fetal origin. The chorion and villi contain blood-vessels filled with fetal nucleated red blood cells, while the intervillous space is filled with maternal blood. Issue is taken with Kuehne, who claims that there is no formation of decidua cerotina in tubal pregnancy, but only a pseudo-decidua from the layer of Langhans, Herzog claiming that there is a decidua formation from the connective tissue of the tubal mucosa, and while a reflex is formed it degenerates very early. The wall of the tube becomes extensively edematous, and consequently offers slight resistance to the rapid proliferation of the villi and their coverings in their attempt to gain a firm attachment for the ovum, and accordingly we see frequently an epithelial proliferation that reminds one of syncytioma malignum of the uterus. This proliferation leads later to extensive hemorrhages in the intervillous space, with the subsequent death of the fetus. In the forty cases from which the author gains his data he was struck by the great changes in the placenta and the frequency of the intervillous hemorrhages, which, in many instances, must have considerably antedated the rupture of the gestation sac. Uterine decidua was found in most of the cases examined.—*St. Louis Medical Review.*

Special Notices.

□ D. S. MADDOX, M. D., United States Examining Surgeon, Coroner, Marion Co., Ohio, says: "(Med. Brief) . . . For the control of pain opium is and always has been the sheet-anchor. But opium, pure and simple, has many disadvantages which render its use in some cases positively harmful. Opium is one of the most complex substances in organic chemistry, containing, according to Brunton, eighteen alkaloids and an organic acid. The ordinary alkaloids, of which morphia is the chief, have the same objections as the crude drug. They constipate the bowels, derange the stomach, and worst of all, induce a habit which utterly destroys the moral and physical nature of the individual. While looking about me for some agent which would produce satisfactory anodyne and hypnotic results without the deleterious and pernicious after-effects of opium and its ordinary derivatives, I came upon the preparation known as papine. After a somewhat extended trial of this remedy I am convinced that it is the ideal anodyne. Although derived from the *Papaver Somniferum*, it is singularly free from the objections of the ordinary opiates. It does not constipate; it does not derange the stomach; it does not cause headache; it does not induce any drug habit; it is safe, and may be given to children as well as adults."

SIMILAR TO THE EFFECT OF SUNLIGHT.—The physiological-chemistry of antikamnia, in disease, exhibits analgetic, antiperiodic, antipyretic, and antiseptic functions. Its antiperiodic tendency is similar to the effect of sunlight, though differently expressed. However, with antikamnia this latter function is materially aided when combined with other well-known drugs, such as quinine and the milder laxatives. The ideal combination I have in mind may be obtained in "laxative antikamnia and quinine tablets." To reduce fever, quiet pain, and at the same time administer a gentle tonic-laxative is to accomplish a great deal with a single tablet. Among the many diseases and affections which call for such a combination, I might mention la grippe, influenza, coryza, coughs and colds, chills and fever, and dengue with its general discomfort and great debility. These tablets administered in doses of one or two and repeated every one or two hours are a perfect antiperiodic in malaria, and a perfect reconstituent tonic—an expression of solar life, light, and energy in malarial anemia.—*L. P. Hammond, A. B., M. D., Rome, Ga., in the Medicus, May, 1901.*

A HANDSOME GROUP OF PORTRAITS.—About a year ago, within the short period of three weeks, four eminent and distinguished physicians departed this life. Two of these well-known men (Hunter McGuire and Lewis A. Sayre) were surgeons and two (Jacob M. DaCosta and Alfred L. Stillé) physicians, and three of them were ex-Presidents of the American Medical Association. Believing that the rank and file of the profession would appreciate and preserve portraits of these representative practitioners and teachers, the Arlington Chemical Company commissioned a competent artist to paint them in oil in the shape of a panel suitable for framing, and have reproduced the painting for distribution to their friends in the profession. This handsome and thoroughly worthy group of portraits is now being mailed, and if any physician is, perchance, omitted from the list, a request will bring a copy.

SANMETTO IN FREQUENT MICTURITION AND NEPHRITIS FOLLOWING LA GRIPPE.—I used Sanmetto in a case of a man, seventy-eight years of age, recovering from la grippe, troubled with frequent micturition and chronic nephritis. The result of the agent was completely satisfactory. Have used it since in cases of irritable bladder with pleasing results.

A. BLODGETT, M. D.

Benecia, Cal.

THE
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"NEC TENUI PENNĀ."

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NO. II.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

FOREIGN BODIES IN THE AIR-PASSAGES.*

BY M. F. COOMES, A. M., M. D.

Professor of Physiology, Ophthalmology, Otology, and Laryngology in the Kentucky School of Medicine; a Member of the American Medical Association, the Kentucky State Medical Society, and the Louisville Clinical Society; Ophthalmic Surgeon to Louisville City Hospital and the Kentucky School of Medicine Hospital; Consulting Ophthalmic Surgeon to Sts. Mary's and Elizabeth's Hospital, etc.

The following statistics of foreign bodies in the air-passages will prove interesting: Of the four thousand and forty-eight patients at Juaraz's clinic, in Heidelberg, one hundred and six applied for the removal of foreign bodies from the throat, and in only four was a foreign body found after careful examination. From 1885 to 1890, of the seven thousand eight hundred and forty patients who applied to the throat department of the New York Eye and Ear Infirmary, none had any foreign body in the pharynx, palate, fauces, or tonsils; that is to say, in the throat. Fifteen had foreign bodies in the larynx, and in sixteen the foreign body was found in the nasal cavity.

Burnett gives the following: "Of the three hundred and twelve cases in which the foreign body was located in the larynx, it was removed by incision through the neck in one hundred and twenty-four cases. Of these, twenty-five by laryngotomy, all recoveries; eighty-one by tracheotomy, with sixty-five recoveries; ten by laryngo-tracheotomy, six by thyrotomy, and one by external incision, the nature of which was not specified, all recoveries; one by pharyngotomy, in which the patient died. In the other one hundred and eighty-eight cases no operation was attempted in thirty-one, and only three of these cases recovered;

* Read before the Brashear Medical Society, at Bloomfield, Ky., October 16, 1901.

in forty the foreign body was expelled spontaneously, with thirty-eight recoveries. In one hundred and one it was removed by forceps through the mouth, all recoveries. Of the other sixteen cases, three were removed by inversion of the patient, two by the use of hooks, two by the fingers, six by emesis, and the other three by the use of the snare, sponge probang, and turpentine respectively, all recoveries. Thus we have of the three hundred and twelve cases, two hundred and sixty-five recoveries (84.9 per cent) and forty-seven deaths.

"Of the four hundred and fifty cases in which the foreign body was lodged in the trachea, it was removed by incision through the neck in two hundred and thirty-nine, with two hundred and one recoveries. Of these, two hundred and twenty-one were by tracheotomy, nine by laryngo-tracheotomy, eight of which were recoveries; seven by laryngotomy, and one by thyrotomy, all recoveries. Of the remaining two hundred and eleven cases, in fifty-eight no operation was performed, and there were but two recoveries. In one hundred and twenty-four the foreign body was expelled spontaneously, with one hundred and twelve recoveries; in fourteen removal by forceps, nine by inversion, two by emesis, one by the use of iodine, one by a blow on the back; all were recoveries. In two cases oil was used, with one recovery. Thus of four hundred and fifty cases of foreign bodies in the trachea there were three hundred and forty-three recoveries (77 per cent) and one hundred and seven deaths.

"It is to be observed that of the seven hundred and sixty-two cases of foreign bodies lodged in the air-passages, there were three hundred and sixty-three in which they were removed by an incision through the neck, with three hundred and eight recoveries (84.8 per cent) and fifty-five deaths, while of the three hundred and ninety-nine in which bronchotomy was not resorted to there were three hundred recoveries (75.2 per cent) and ninety-nine deaths. These statistics are quite in harmony with those of Durham and Gross.

"Durham reports seven hundred and six cases of foreign bodies in the air-passages. Of four hundred and thirty-five on which operations were performed, there were three hundred and twenty-eight recoveries (75.4 per cent). Of the two hundred and seventy-one cases in which no operation was performed, one hundred and fifty-six resulted in recovery (75.5 per cent).

"Gross reports one hundred and eighty-three cases. In ninety-eight cases the air-passages were opened, with eighty-three recoveries (84.7

per cent) and fifteen deaths. In eighty-five cases in which no operation was performed there were fifty-six recoveries (65.9 per cent) and twenty-nine deaths.

"Weist reports one thousand cases, collected mainly from private sources. Of these, three hundred and thirty-eight were operated on, with two hundred and forty-five recoveries (72.5 per cent) and ninety-three deaths. In five hundred and ninety-nine cases no operation was performed, with four hundred and sixty recoveries (76.8 per cent) and one hundred and thirty-nine deaths.

"Combining the statistics of Durham, Gross, Weist, and the writer we have two thousand six hundred and fifty-one cases, in twelve hundred and thirty-four of which there were operations, with nine hundred and sixty-four recoveries. In fourteen hundred and seventeen cases no operations were performed, with ten hundred and thirty-five recoveries (73 per cent)."

It will be seen that all the statistics except Weist's support the consensus of opinion of surgeons, that no foreign body should be allowed to remain for any length of time in the air-passages without the operation of bronchotomy; but this should be done in urgent cases only when all other means of extraction have failed.

It is interesting to note that the percentage of recovery in operations for the removal of foreign bodies as brought down to date is eighty-four and eight tenths, while in the days of the late Dr. Samuel Gross it showed a percentage of eighty-four and seven tenths. It would seem from this that asepsis and antiseptics have had little effect upon this peculiar operation. This is as we might expect, because in nearly all instances of operation for the removal of foreign bodies it is a bleed-out, so to speak, and there is little chance for absorption of septic material.

Report of Cases of Foreign Bodies in the Windpipe. The first of these occurred in 1874, the patient being under the care of the late Dr. J. A. Larrabee, of Louisville. The history of the case is as follows: The doctor was sent for hastily, and when he arrived at the home of the child, whose father was a tinner, the father told him that the child had been playing in his shop and had swallowed a rivet, such as is used for fastening the joints of stove-pipe, being a little piece of iron one-eighth inch in diameter and half an inch long, with a small head. The child was in great distress, suffering from continuous fits of coughing, but after a time became quieted down, though it continued to have

spasmodic coughs occasionally. The parents believed that the child had expelled the foreign body, and, aside from occasional spells of coughing, there was nothing unusual occurred in connection with the case until two or three months subsequently. At this time the child became very much distressed and coughed considerably, and it was noticed that there was an elevation of temperature and sore throat. There could now be a distinct noise heard in the region of the bifurcation of the trachea. It presented the idea of something slipping down during inspiration and rising up during expiration. It was a clicking sound. The doctor remembered that the child had swallowed the rivet, and sent for me in consultation. Examination showed that it had diphtheria or membranous croup, the larynx being inflamed, and the windpipe as well, both being covered with a grayish membrane. It was before the time of intubation, and the parents positively refused to let tracheotomy be performed. The child died in thirty-six hours from exhaustion. The post-mortem revealed the rivet encapsulated at the bifurcation of the trachea, apparently attached to the outer side of the wall. It is quite evident that the rivet would have remained there indefinitely unless something had occurred to break up the capsule and free it, because I well remember that it was apparently in under the mucous membrane; yet it was pendulous, so much so as to move up and down during inspiration and expiration.

In this case we have a very valuable lesson concerning foreign bodies located in the air-passages. Possibly if this child had been an adult the mental worry and distress would have been much greater. Had this body been located further down in the bronchus there doubtless would have been more serious trouble, because there certainly would have been closure of the tube at that point, but in the present case the tube was large enough to admit sufficient air to keep the lung distended, hence the greatest trouble was the irritating effect, and no doubt it was located in the area where the development of the sensitive nerves was least manifested. I know of no condition where you would get a similar sound to that of a foreign body moving up and down in the trachea unless it should be where you had a pedunculated growth; then you would get a similar sound. This case and the symptoms were so thoroughly impressed upon me that I am sure I will never forget the lesson learned by observing them.

CASE 2. Some two years ago a case was brought to me in which it was supposed that the child had drawn a grain of corn or foreign body

of some kind into his windpipe. The history of the case is as follows: The child was about six years old, and had been in a field where his father was plowing, and had been chewing sassafras buds; he also had some corn in his pocket. The father paid but little attention to his maneuvers but went on with his plowing, until suddenly he found the boy in a violent fit of coughing. He could hardly get his breath, and this distress kept up for several hours, notwithstanding the efforts of a physician to quiet it. The doctor gave an emetic, hoping that the foreign body was located somewhere in the region of the pharynx, thus producing the coughing. This did not relieve the symptoms; on the contrary, it aggravated them. The child was given an opiate, which quieted him to a degree. The following evening, thirty-six hours after the accident, he was brought to my office; he was in great distress, breathing with difficulty, and suffering a great deal of pain. The father believed that the child had sucked a piece of the sassafras wood or leaf into his windpipe, but the little fellow maintained that it was a grain of corn he had swallowed, which afterward proved to be true. Auscultation revealed the peculiar sound mentioned in the other case, namely, that of a clicking or flopping sound, if I may be permitted to call it such, with each inspiration and expiration. It was evident that some foreign body was in the respiratory tract, and that there was a great deal of fluid connected with the body. It was dark when they arrived at my office, and almost impossible to think of operating at that time in the evening. I instructed the father to continue the use of the opiate in such doses as he had been giving it to keep the boy quiet, and bring him to the Kentucky School of Medicine the next morning, when I would open the windpipe and remove the foreign body. He was on hand at 9 o'clock the next morning, but, very much to my surprise, the boy seemed to be free from all distress, was in excellent humor, and busily engaged in eating peanuts, notwithstanding the fact that I had told the father to bring him to the college without having eaten any thing. The great improvement in the boy's condition led the father to believe that the worst was over and the operation would not be necessary, hence he had permitted the boy to eat his breakfast and the peanuts. Auscultation at this time revealed the fact that the clicking sound and all evidence of the foreign body impeding respiration were greatly modified, but as he had not expelled it I was convinced that it was still in the air-passages. The absence of the respiratory murmur from the lower portion of the right lung gave evidence of the accumu-

lation of fluid, thus preventing the air from entering that portion of the lung. This strengthened my belief of the presence of the foreign body in the bronchus on that side. He was coughing considerably, and there was every evidence of a good deal of irritation, but this one particular symptom was absent. After much persuasion I was permitted to operate, and when the trachea was opened I separated the edges of the wound and looked up into the larynx through the wound with a reflected light, to be sure there was no foreign body there. During the time I was making this investigation a probe was pressed in the larynx against the cords from below; my efforts to press them from side to side provoked spasmodic action of the diaphragm and forced out an enormous amount of purulent liquid, and with it a large grain of corn.

This case made an uninterrupted recovery, notwithstanding the fact that it was believed by those who saw the case with me that the child would certainly have pneumonia, as there was such an enormous amount of sero-purulent fluid expelled at the time of the operation. The practical lesson learned in this case was the cause of the absence of the clicking sound on the morning of the operation. As was stated before, the air did not enter the lower portion of the right lung, hence it was quite evident that the lung was blockaded by something. The grain of corn was unusually long and sharp at the small end. During the time preceding the operation it was quite evident that there had been sufficient liquid poured into the right bronchial tube to float the corn and in this way prevent it from scratching the side of the tube, hence all the distressing symptoms were removed, because the irritation had been removed; that is, it had been prevented by the grain of corn floating up and down instead of being blown up and down. This seems to me to be a very valuable point in connection with such cases.

CASE 3 occurred some time in the early eighties. A little girl, one Sunday evening, was playing with a pin in her mouth, and in some way the pin caught behind the base of the tongue and gave her a great deal of pain. Her mother made several unsuccessful efforts to remove it, and finally took her to a doctor to have it removed. The child became very much distressed at the pain, and continued to cry and fret, but as there was no difficulty in breathing the parents concluded that no harm had been done. She still continued to cry, and finally she was brought to my office at 10 o'clock in the evening, and insisted

that her neck was being stuck. Upon examination I found the point of the pin just beneath the skin at the lower edge of the thyroid cartilage on the left side. It was before the days of cocaine, and I suggested to the father that I grasp the skin tightly so it would give little pain, open the skin with a knife, and pull the pin out. This was agreed to and the pin was pulled out, giving the child considerable pain and requiring a great deal of force to remove it.

This is a unique case, and shows what curious things will occur in connection with foreign bodies of this kind. It seemed impossible to the parents that the pin could be in that locality, and I thought but little of what the child was saying until the evidence of the pin was thoroughly manifested. This case demonstrates the importance of paying attention to all complaints made by the patient, whether young or old, no matter how absurd they may seem. They certainly deserve the most earnest consideration.

LOUISVILLE.

A REPORT OF THREE CASES OF PNEUMO-TYPHOID FEVER.*

BY W. E. SHEPHERD, M. D.

Some of the older authorities describe typhoid fever as purely a disease of Peyer's glands. Osler says: "It is now well known that typhoid fever is no more primarily intestinal than is smallpox a cutaneous disease."

Studies in bacteriology, especially promoted by Flexner, Kraus, and others, show us that we may have a pneumo-, a nephro-, spleno-, or a cerebro-spinal typhoid fever.

Hare, in his work on "Medical Complications of Typhoid Fever," says: "By pneumo-typhoid fever I refer to that form of typhoid fever in which the bacillus of Eberth exercises its primary influence upon the pulmonary parenchyma, producing symptoms which are practically identical with those of ordinary croupous pneumonia, even to the rusty sputum, although the rigor of onset, as seen in croupous pneumonia, may be absent or modified, and the onset in general is more insidious." He also says: "This condition must not be confused with the so-called typhoid pneumonia, in which there is a double infection, nor the state in which the pulmonary consolidation results from asthenia."

* Read before the Brashear Medical Society, at Bloomfield, Ky., October 16, 1901.

The following cases will illustrate very well, and are a few of a number met with in my practice last winter and spring:

CASE 1. I was called early on the morning of January 7, 1901, to see Mr. A. T., age twenty-three; who had been complaining for some days with headache, pain in back, and had some cough with bad cold. I found him with pulse 116, temperature 104°; very restless; severe headache; back, limbs, and spleen tender, with some diarrhea. I saw him again at nightfall; found pulse 120, temperature 105.4°; delirious, complaining of headache. The urine was scanty and the diarrhea still present, with some cough. Ordered him sponged off frequently through the night, and gave five grains of phenacetine with quinine, and small doses of calomel and sub. gal. bis. every two hours through the night. On the morning of the 8th I found his pulse 118, temperature 103.2°; still delirious, with pain in right side. An examination of his chest revealed at the right middle and lower lobes the physical signs of consolidation; dullness on percussion, bronchial breathing, absence of vesicular sounds, with rapid breathing in left lung. Bowels still loose, with diarrhea; spleen enlarged and painful. At 10 P. M. on the 8th I found pulse 124, temperature 104.6°; cough, expectorating brick-dust sputum. There was still pain over the spleen, diarrhea and delirium. On the morning of the 9th I found pulse 120, temperature 103.4°; expectorating freely; diarrhea; still delirious, with rose spots on chest and belly; also found more lung structure involved and nosebleed. At 10 P. M. I found temperature 105.2°, pulse 130; still delirious and cyanotic. On the morning of the 10th I found pulse 124, temperature 103.6°; breathing rapid; diarrhea characteristic of typhoid fever. The entire lung on the right side was now involved and cyanosis still marked. At 10 P. M. I found lower lobe of left lung dull and very painful; still delirious, very restless; temperature 105.4°, pulse 136. He continued to grow worse, and died on the 19th, living only twelve days from the onset.

CASE 2. On the morning of the 8th of January, after I saw Case 1, his father asked me to see his brother Leo, who had consulted me several times previously, with severe headache, pain in limbs, and a dreadful cold. I found his pulse 110, temperature 102°; on examining lungs I found pain in lower lobe of left lung, with all signs of pneumonia; with severe headache, very nervous, and slightly delirious. On afternoon of 8th I found pulse 120, temperature 103.2°; still pain in lower lobe of left lung, headache very severe, restless and delirious. On the

morning of the 9th found pulse 118, temperature 102° ; still delirious; expectorating rust sputum. On afternoon of 9th I found pulse 130, temperature 104.6° ; very delirious, sleeping none through the day; still expectorating rusty sputum, with several large, loose stools. On morning of 10th the pulse was 124, temperature 102.4° ; slept very little; delirious muttering. On examination I found middle lobe of left lung also affected; considerable cough, expectorating quite freely; four or five large, loose stools through the night, characteristic of typhoid fever. At 10 P. M. of the 10th I found pulse 128, temperature 105° ; still delirious; very little sleep through the day, and very nervous. On examination found rose-colored spots on chest and stomach, with nosebleed and several large stools. He ran along about the same until the 15th, when, in the afternoon, found his pulse 130, temperature 105.8° ; pulse very weak, and very delirious; had had no sleep through the day and little for several nights previously. It required considerable effort on part of the nurse to keep him in bed; cyanotic. Morning of the 16th was extremely weak, pulse 130, temperature 103.2° ; expectorating not so freely; several large stools through the night. I ordered $\frac{1}{8}$ gr. strych. every three hours, with brandy and milk (all they could get him to take). At 10 P. M. I found no change, pulse still weak, temperature 105.2° , and still delirious. No sleep, though he had taken several doses of morphine through the day. Ordered stimulants kept up through the night and morph. hypoder. every three hours until sleep, and as much milk as he could take. At 6 A. M. of 17th I found my patient no better; pulse 126 and very weak, temperature 103° ; delirious, very tremulous. I ordered $\frac{1}{8}$ gr. of strych. every three hours and $\frac{1}{16}$ gr. of nitro-glycerine every five hours, with as much milk and whisky as they could get him to take. At 9 P. M. Dr. Seeley saw the case with me, and, at his suggestion, we gave him $\frac{1}{16}$ of a grain of hydrobromate of hyoscyamus hypodermatically; pulse very weak, still very delirious; temperature about the same. On 18th at 6 A. M. found patient had had as much as one hour of interrupted sleep; was still very nervous and very delirious; pulse 126 and weak, temperature 102.6° ; several large stools; tongue dry, sordes on gums, tenderness over bowels. Stimulants were continued, and in connection ordered nurse to give him half a dram of tr. capsicum in milk and brandy, with $\frac{1}{16}$ of a grain of hyoscyamus, and repeat every four hours until he slept. 10 P. M.: I found patient very much less nervous; had slept through the day about three hours interruptedly; pulse 120, very

weak; temperature 104.4° , with only one dose of hyoscyamus and capsicum. I ordered another dose of hyoscyamus at 11 P. M. and half a dram of capsicum, with strychnine and nitro-glycerine; continued with all the milk and whisky he could take. 19th at 6 A. M.: I found patient had slept nearly four hours; had very little delirium, very little cough; expectorating mucus, with several large stools; bowels tender and a little tympanitic; pulse 120, weak; temperature 101.6° .

At 10 P. M. found patient with pulse 124, temperature 104.2° ; slightly delirious; still diarrhea; pulse very weak. Continued stimulants through the night, with milk and hyoscyamus, but left off capsicum. Morning of the 20th: Temperature 101.4° , pulse 120; very weak; had taken some food through the night. Evening of 20th: Pulse 120, temperature 104° ; patient very weak; had had several short naps through the day; was less delirious and less nervous; had taken several spoonful of milk and whisky through the day. Morning of 21st: Pulse 120, temperature 101.2° ; very weak; pulse dicrotic; slept four or five hours through the night. Stimulants were continued, with morphine and atropine; nitro-glycerine. 10 P. M.: Pulse 120, temperature 103.2° ; had had about three hours of sleep; taken some nourishment; two large stools through the night. At 6 A. M. 22d: Pulse 112, temperature 101° ; still weak; had had profuse perspiration through the last part of night. Stimulants continued. 10 P. M.: Pulse 100, temperature 102° ; very weak; slept through the day at intervals; had taken milk and a small quantity of whisky. 7 A. M. 23d: Pulse 99, temperature 100° ; had profuse perspiration; very weak; could not retain milk, but had taken about four ounces of broth through the night; slept fairly well; fainted when head was raised. Stimulants continued; patient sponged in alcohol every three hours. 9 P. M.: Pulse 99, temperature 99.2° ; slept as much as four hours through the day; was still weak, and had had no move on his bowels through the day. Morning of 24th: Pulse 86, temperature 98.5° ; very profuse perspiration through the night; pulse weak; patient extremely weak; was rubbed off dry several times through the night and bathed in alcohol. At 10 P. M.: Patient had some broth and brandy through the day; slept some; pulse 80, temperature 97° ; strychnine $\frac{3}{10}$ grain every two hours, morphine $\frac{1}{6}$, and atropine $\frac{1}{10}$ of a grain every four hours with brandy and broth. 6 A. M. 25th: Patient about the same, with pulse 70, temperature 96° ; could not be turned without sensation of fainting. Stimulants continued, with hot-water bottles in bed. 10 P. M.: Temperature 97° , pulse 68;

continued treatment. 26th: Slept well through night; stimulants continued; pulse 50, temperature 96°. I ordered stimulants continued, alcohol bath, and sides over both lungs painted with iodine, and ordered also oxygen tube from Newman. At 10 P. M. I found the patient's pulse 50, temperature 96.2°; very weak; had taken some nourishment through the day. I gave him five minutes' inhalation of oxygen, and ordered nurse to repeat every hour and a half, with stimulants through the night. 6 A. M. 27th: Patient had had oxygen every hour and a half; pulse 56, temperature 98°; small stool. He had rested quite well, with very little perspiration, and had taken brandy and milk-shake through the night. I stopped morphine and atropine, also nitro-glycerine, but continued strychnine. 10 P. M.: I found patient's pulse 68, temperature 98.5°; pulse better; had sides painted with iodine again; continued oxygen, and gave strychnine every five hours. My patient continued to improve under the oxygen treatment every four hours, and after a few days three times a day, and was dismissed well the 12th of February.

CASE 3. If you will bear with me for a few moments I will report one more case. This was the mother of the two young men. She had been ill for several months with erysipelatous inflammation, cellulitis of her left lower limb, and had been up only two weeks when her boys were taken sick. For several days she had complained of a severe headache. On January 12th, in the morning, her husband requested me to see his wife; she had had a rigor in the night, and was suffering with extreme pain in her head and right side. I found pulse 110, temperature 102.2°; very nervous; spleen enlarged and very tender, with dullness on middle lobe of right lung; rapid breathing. 10 P. M.: Pulse 112, temperature 103.2°; delirious; considerable cough; tongue dry, brown and pointed, with sordes on gums. The 13th at 6 A. M.: Pulse 110, temperature 102°; muttering delirium; spitting rusty sputa; she had slept fairly well through night. 10 P. M.: I found patient's pulse 116, temperature 102.8°; very restless; pulse weak, with nosebleed; tenderness over spleen, and four large, loose stools, which were very offensive; still delirious. 14th at 6 A. M.: Pulse 112, temperature 102.2°; very restless; very little sleep, interrupted; had taken some milk-shake through night, and had had several large, loose stools. She was still delirious and very nervous, expectorating rusty sputa. 10 P. M.: I found pulse 116, temperature 103°; still delirious; had had no sleep through the day, and had taken a small quantity of milk. 6 A. M.

the 16th: Pulse 110, temperature 102.2°; no sleep; several large stools, offensive; still expectorating. 10 P. M.: Pulse 116, temperature 103°; condition about the same; no sleep; pulse weak. I commenced stimulants, $\frac{1}{8}$ of a grain of strychnia every three hours. 6 A. M. 17th: Had restless night; no sleep; delirious muttering; very nervous; temperature 102.2°, pulse 110; little food; coughing some; expectorating very little. I gave her one fourth of a grain of morphine every four hours until three doses were given. 10 P. M.: She had slept some through the day interruptedly, and was still muttering. I commenced stimulants, and ordered one fourth of a grain of morphine every three hours and twenty drops of tr. of capsicum every five hours until muttering stopped; temperature 103°, pulse 112. 18th, 6 A. M.: Found my patient had had four hours of interrupted sleep; was less delirious; pulse 110, temperature 101.4°; still three or four stools through the night.

She ran along about the same, with no cough or expectoration, until the 24th, when I noted temperature 100.2°, pulse 98. On examining chest I found considerable dullness over lower lobe of right lung. I ordered both lungs painted with iodine, and continued strychnine $\frac{1}{8}$ of a grain every three hours, with nitro-glycerine $\frac{1}{16}$ of a grain every four hours hypodermatically. On the 25th at 6 A. M. I found pulse 94, temperature 100.2°; one large stool through the night; stimulants continued, and at 10 P. M. pulse 90, temperature 100.4°; strychnine, whisky, and milk. January 26th at 6 A. M.: Pulse 90, temperature 97.5°; strychnine continued; every three hours gave whisky and milk. 10 P. M.: Pulse 78, temperature 98°; small stool at 2 P. M. January 27th at 6 A. M.: Pulse 78, temperature 97°; continued strychnine with milk and brandy; sleeping fairly well; not so nervous. 10 P. M.: Pulse 76, temperature 97.2°; had fairly good day; slept well; took some broth. January 28th, 6 A. M.: Pulse 80, temperature 97.6°; milk, whisky, and strychnine continued. 10 P. M.: Strychnine continued; pulse 80, temperature 98°; had rather a restless day; strychnine continued. At 11 P. M. began oxygen treatment, and gave five minutes' inhalation every three hours. 6 A. M., 29th: Slept one hour; pulse 90, temperature 98.5°; had milk and ice-cream through the night. 10 P. M.: Patient had a good day; slept five hours without interruption; pulse 78, temperature 98.5°. She continued to improve under the strychnine three times a day, with oxygen every three hours, and made an uninterrupted recovery. On the 10th of February I found consid-

erable dullness over lower and middle lobes of the afflicted side, but after frequently painting with iodine her lung cleared up entirely.

I report these cases for a twofold reason: First, this form of typhoid fever has been rare in my practice, or I have not recognized it until recently. The next reason is to elicit from the members of the Society their experience in the treatment of these low forms of asthenic fever with oxygen gas. I am sure I would have lost both of these cases had I not resorted to the oxygen.

TAYLORSVILLE, KY.

A FEW REMARKS ON HEROIN HYDROCHLORATE.*

BY E. Y. JOHNSON, M. D.

Every physician has daily need of an analgesic, and many have been the combinations made up for the purpose with morphia or its salts as a last resort. The train of evils following the use of the latter drug are only too familiar to all of us. I speak of the vicious habit which once formed is rarely broken, and which has wrecked thousands of lives. Aside from this, the *immediate* bad results from the use of morphia, such as constipation, diminished kidney action, and sick stomach, are very serious objections and preclude its use in many instances. Codeia, vaunted as its substitute, is of little value as an analgesic. Having a special action upon the respiratory tract and pelvic organs, it has a field of usefulness, but as a pain reliever it is not what was hoped and looked for. Lately the new drug "heroin" has attracted attention, and I have tried it in many conditions where there was pain of the most intense type, and this paper is the result of my experiences. I shall not give you clinical reports, but will give you in a general way the applications therapeutically of the remedy. Heroin is a chemical produced from morphine, but greatly different in effects. It has all or even more of the pain-relieving qualities of morphine, but none of its bad effects. Except in rare cases of idiosyncrasy it does not constipate, does not diminish the urinary secretion, does not cause sick stomach, and last and most important of all, does not cause a habit of using it. It was first introduced as a remedy for cough, especially the harassing cough of advanced phthisis, and gave

* Read before the Brashear Medical Society, at Bloomfield, Ky., October 16, 1901.

excellent results. From that its use has gradually spread, until now it is used largely as a pain-reliever.

Heroin comes in two forms, the alkaloid and the hydrochlorate. The alkaloid is insoluble in water, and therefore not as rapid in its effects as the salt. This fact accounts for the failure of many physicians to get good results from the drug. My experience has been confined to the hydrochlorate, so in speaking of it the hydrochlorate is meant. It is a white crystalline powder, very freely soluble in water—simple elixir, tinctures, etc. It has a bitter taste. By reason of its solubility it may be prescribed in combination with almost any liquid drug. In coughs it will control the paroxysms better than any agent I know of. In bronchitis I have found it to give great relief when combined with expectorants, as it not only lessens the violence of the cough, but seems to have a specially soothing, quieting influence on the inflamed mucous membrane. In the cough of phthisis nothing I ever used has given so much relief. For this I give in it powders $\frac{1}{8}$ gr. each, combined with grs. v of sacch. alba., one to be taken at bedtime, to be repeated in two hours if necessary, and I rarely find it necessary to repeat it. It always checks the cough and allows the patient the sleep he so much needs. In the dyspnea of asthma it soon relieves the paroxysm, allays the nervousness, and promotes sleep. For this purpose it may be given hypodermatically or combined in solution with the various asthmatic remedies, such as nitro-glycerine, atropia, and grindelia.

As a pain-reliever I have found it of the greatest value in acute articular rheumatism, migraine, neuralgias, sciatica, and nervous headache. For this purpose I employ it hypodermatically, giving from one-eighth to one-sixth grain at each dose. I have given it continuously in one case of chronic Bright's disease for over six months to relieve the headache, and with great success. The patient, a female about thirty years old, could not take medicine internally. I began on one-sixth grain hypodermatically, and now only use one-twelfth grain. The headaches only come now at long intervals, and there is no desire for the drug. Six months ago the urine contained quite a large amount of albumen and casts. To-day there is barely a trace of albumen, not constant, and no casts. I can not say the heroin has cured the case, but I do know the patient has vastly improved and is very grateful. I have used heroin in cholera morbus and intestinal colic with quick results. In every case relief is quick. In these cases I use it hypodermatically.

The relief from pain following its use by hypodermic is astonishingly quick—in some instances within a minute. In more than one instance relief was had so quickly that patients expressed alarm.

Given to a morphine habitue in place of the usual drug, it satisfies the craving and seems to destroy it finally without any longing for the new drug; and in this field alone it should prove very useful. I do not hesitate to use it for any pain demanding immediate relief. One patient describing its effects compared to morphine, said: "Morphine seems like a great big man seizing hold of you and forcibly dragging you off, while heroin takes you by the hand and gently leads you."

Sleep is produced by heroin usually in from eight to fifteen minutes if given hypodermatically, and usually lasts from eight to twelve hours. The patient awakens refreshed. There is no special thirst afterward; no dryness of skin or fauces; no itching. The first effect is to stimulate the heart with accelerated pulse, followed by a slower pulse, but full and regular. The respirations are reduced in number. I have used it in both strong and weak with good and bad hearts, with uniformly good results. The hypodermic tablets are not as effective as when the powder is dissolved and used hypodermatically, so that now I carry one-twelfth grain powders in my case, using one or two as occasion demands. I have not tried it on children under ten years of age, but would feel perfectly safe in doing so. The dose for an adult is from one-twenty-fourth to one-sixth grain, according to the effect desired. It can be repeated every hour or two.

I trust some of you may try it, and, finding it as effective as I have, use morphine very seldom. I know if you use the hydrochlorate heroin you will not be disappointed.

LOUISVILLE.

**STRICTURE OF THE MALE URETHRA: A RESUME OF THE
PRESENT METHODS OF TREATMENT.***

BY HENRY H. KOEHLER, M. D.

Professor of Skin and Genito-Urinary Diseases, Kentucky University, Medical Department; Visiting Dermatologist and Genito-Urinary Surgeon, Louisville City Hospital.

The extent of the field of stricture operations will not permit me in an article like this to go into any details of the operations themselves; I purpose merely to survey the recent advances and set forth the predilections and dislikes for certain operative methods that obtain among representative surgeons to-day.

Finger defines stricture as follows: "A stricture is the result of a chronic cirrhotic periurethritis and cavernitis complicating a chronic urethritis." This brings to mind the salient features of many strictures, the condition being not merely that of a constricting band or cicatrix, but in many instances essentially a subacute inflammatory process.

I know of no better division of strictures than to divide them into recent and old, or inflammatory and fibrous or inodular. Stricture due to traumatism is to be classed alone, the result of healing processes here presenting certain peculiar features, complete obliteration, for example. The stricture that I have particular reference to is the gonorrheal stricture.

It must be born in mind that virtually a recent stricture consists of a bulging mass of inflamed tissue presenting the usual picture of a round-cell infiltration. A very important thing to remember, further, is that within this tissue we have yet lingering the gonococcus, its activity subdued and its propagating power lessened. Such an infiltrated tissue will in time merge into one that might be called cicatricial. Fibrous material is deposited, the stricture grows tighter, the walls of the urethra become hard, inelastic, and the type of the old or inodular stricture is before us. Practically, then, as viewed to-day, a recent stricture and chronic gonorrhea are the same, and the treatment conducted on similar lines. Endoscopically we find at the seat of the trouble clogged glands of Littre, engorgement of the lacunæ of Morgagni, epithelial thickenings, infiltrated submucous tissue or superficial epithelial losses. The early infiltrations are yet of a kind that permit of their dispersion by pressure, and I think there is an unanimity of opinion that dilatation, either with ordinary steel sounds or with especially constructed dilators, such as Oberlaender and

*Abstract of paper read before the Kentucky State Medical Society, May, 1901.

Kollmann have devised, is the ideal treatment. However, it is a question whether such conditions merit the term stricture; they had better be looked upon as inflammatory indurations in which usually the gonococcus is to be found, and where the elimination of this organism is as much to be desired as the restoration of the lumen of the canal, both of which can be accomplished by the judicious application of pressure.

Let us consider the effect of dilatation in cases where it is applicable: First, the distension itself in obliterating a contraction behind which exists, of necessity, more or less irritation, gives relief to such symptoms as bleeding and reflex disturbances of the vesical neck. Second, it seems positively proven that distension carried to the point where a muco-purulent discharge is set up, as often happens, will forcibly invade deep-seated nuclei of gonococci and cause their mechanical dispersion and elimination. It may be asked, Are the extreme dilatations as now practiced, and coming more and more into vogue, good surgery? Is it not too rough a method to gain the point aimed at? The success clinically, in the hands of able men, forces us to but one conclusion: The method of extensive dilatation has no evil consequences, and if we wish to clear a canal of its latent foci of gonococci, it is the only one we have at our disposal. Wossidlo lays stress on the fact that an existing discharge containing gonococci is no contra-indication to this treatment, but that it becomes the treatment of choice. Much harm is sometimes done, though, by dilating too frequently. Keyes explains in his work the necessity of not dilating at too short intervals. Some time must elapse to allow the irritative congestion produced by the instrument to subside before it is reintroduced; from five to nine days is a safe time for the steel sound. In using the branched dilators, much longer time must be allowed to pass between sittings.

Dilatation is a procedure applicable to all regions of the urethra, and is usually practiced by the use of the steel sound, either straight or curved, depending upon the seat of the lesion. Bearing in mind, though, the extensive dilatability of the bulbous portion of the urethra, it becomes obvious that the full benefit of pressure can not be obtained here with a sound that passes comfortably the meatus and middle of the penile portion. The bulbous portion can be dilated up to 40 F., whereas a meatus of 30 is quite large, and the narrowest part of the penile portion averages about 30 F. also. To overcome this difficulty which the ordinary steel sound does not meet, the dilators devised by Kollmann are particularly effective. The same difficulty is encountered in the wide prostatic

urethra. Full dilatation is achieved here only by an especially constructed dilator, not by a sound.

The beneficial effect of dilatation treatment will be enhanced if we combine with it suitable irrigations. Dilute permanganate of potassium solution is effective ; at times nitrate of silver and copper sulphate solutions act better.

In our urethral work we have now at our disposal the perfected urethroscope, carrying its own light at the tip of the tube, enabling us to inspect section by section every portion of the anterior and deep urethra ; exact local applications can thus be made, incision performed under guidance of the eye, or engorged follicles punctured and treated electrolytically. It is of the greatest value to control the results of dilatation by urethroscopic inspection as taught by the Oberlaender school. The visible restoration of a congested and infiltrated canal to a state approximating the normal can not help but be grateful to the operator.

I wish, also, to draw attention to the fact that urethral illumination is a valuable mental stimulus to our patients, who at times become despondent and hypochondriacal. The visual control of the surgeon's work appeals to the patient strongly, as I have frequently verified.

To sum up, the advances that have been made in the method of primary dilatation of absorbable strictures are :

First : Exactly adjusted pressure to the part affected, if necessary by use of variously constructed instruments, the best of which, I think, are those devised by Kollmann.

Second : The location of the infiltrated area can now be diagnosed not only by the bougie but also by the urethroscope, and the progress of our treatment noted.

Third : The carrying of the dilatation to quite a high limit, to 30 F. in the penile and close to 40 F. in the bulb.

Fourth : The recognition of the extreme latency of the gonococci within this early infiltrated mass, and the necessity of their elimination from the diseased canal. This last is a matter of vital importance.

Most decidedly we should not be satisfied to dilate a canal merely for the sake of affording passage for a fair stream of urine, such as a diameter of 22 to 24 F. permits ; but we should energetically attack that embryonal type of tissue deposited as the result of an acute inflammation and liable to result later in a scar-like mass with the usual cicatricial distortion and contraction. We must realize, though, that there are many strictures entirely unamenable to our efforts of dilatation, and it is well to

recognize this early and save our patients much unnecessary suffering. Dilatation here ceases to be the primary method of cure, but it still remains an indispensable adjunct as an after-treatment.

If we are confronted with a stricture not responding to dilatation, several ways of dealing with it are at present in vogue. The following methods have their advocates:

First: Internal urethrotomy. (Some exclude in this operation all strictures of the deep urethra; others apply it to any.)

Second: External urethrotomy.

Third: Combined external and internal urethrotomy.

Fourth: Forcible dilatation according to the method of Holt and Pereve.

Fifth: Immediate progressive dilatation according to the method of LeFort.

In their text-books Keyes and White & Martin express themselves as being opposed to internal urethrotomy in the deep urethra, whereas Taylor does a conservative cutting operation in this region, using the *Maison-neuve* instrument. I find, however, in recent European literature that many operators apply internal urethrotomy to all regions of the urethra, claiming good results and an extremely low mortality rate. Among them is no less an authority than Guyon. Good and persistent bladder drainage is the *sine qua non* of the after-treatment, and much of the success depends upon subsequent and long-continued dilatation.

Reginald Harrison is a warm advocate of his combined operation of internal and external urethrotomy. The perineal puncture is made after the internal incision, and drainage is permanently established through the opening. The claims are, and they are substantiated by many, that urinary fever is avoided, and that healing of the incision occurs more naturally and with much less production of cicatricial tissue, owing to the elimination of the baneful local effects of an irritating fluid like the urine.

No matter in what manner we choose to deal with a stricture, the subject of urinary and urethral antisepsis is of great importance. Unquestionably drainage is of inestimable value. All recent advocates of internal urethrotomy dwell upon the necessity of catheter retention until more or less wound closure has taken place. It is practically impossible to disinfect the urethra; the crypts and follicles permit of no such a thing, and the canal can be made only relatively sterile. Yet we should aim to get as near this as possible by using repeated irrigations of bichloride, permanganate of potassium, silver nitrate, or some other active anti-

septic. I can not permit the opportunity to go by without entering a protest against the customary boric-acid irrigation mentioned and advised in every text-book. Boric acid, even in concentrated solution, requires hours to make a deleterious impression upon any of the pus-producing cocci. As an irrigation the application is transient and fleeting. Not enough is retained in the canal to affect any organisms, and boric-acid irrigations are simply sterile water irrigations. Taken by the mouth and lingering in the bladder for hours, its effect is decided and beneficial.

In very tight stricture, requiring filiform manipulation, it is evidently impossible to do any thing in the way of direct local antisepsis in the region beyond. Fortunately we have in the use of several internal drugs decidedly effective means of lessening the danger of urethral sepsis. The drug above all others that claims respect, and which is growing in popularity, is urotropin in five to ten-grain doses, repeated three times daily. Salol and oil of eucalyptus are also reliable urinary disinfectants. Urotropin, however, besides being a direct antiseptic when discharged in an altered state through the kidneys, has this most beneficial side effect, it relieves the alkalinity of a decomposing urine, and by rendering it acid prevents thereby the growth of most bacteria. In an acid urine the phosphates cease to be precipitated, ammonia formation is restrained, the bladder is relieved of chemical irritation, and the vicious circle is broken.

It is folly to continue in the old routine method of administering alkaline drugs in alkaline cystitis, which we often encounter with obstructive lesions of the urethra. To this Finger has recently alluded.

A few further points I would like to call attention to: In all stricture cases a uranalysis should be made. Albumen will nearly always be present, derived from the pus, and would mask a renal albuminuria, consequently casts should be looked for, and the condition of the kidney should guide us also in the choice of an operation.

Morphine when administered for pain should not be given in doses over one-third grain, as otherwise it may cause tenesmus of itself.

As a curiosity I may mention that suprarenal extract deposited upon the orifice of a stricture has enabled several operators to penetrate the hitherto impassable stricture.

In the choice of instruments for urethral work, opinions vary greatly. The French are partial to the use of elastic rubber bougies, and many German authorities also prefer them—Guyon, Gueterbock, and Posner use them exclusively. Others, again, on account of their cleanliness, prefer metallic instruments wherever they can be used, among them Ditell, Antal, and Volkmann.

A very tight stricture may lead to the belief that the condition is practically impermeable, although the dribbling urine argues otherwise. Here we are debarred from using steel or stiff metallic instruments, and are limited to the use of whalebone or the woven silk filiforms. If the stricture is entered and a filiform is passed into the bladder, we have a choice of several ways of gaining further dilatation. Thompson recommended the tying in of a filiform for twenty-four hours or more, resulting in a pressure necrosis, the urine in the mean time dribbling away alongside. LeFort has brought forward his tapering steel sounds, the end screwing into a filiform; the sound follows the filiform through the stricture, and considerable dilatation can be achieved at once. The Banks whalebone filiform acts similarly.

Owing to the continual pain of dilatation, the bleeding and general discomfort, patients sometimes refuse farther treatment unless something more radical and more immediately productive of results is done. Consequently not only the theoretical applicability of certain operations must be considered, but the circumstances of the patient also. Dilatation is slow and extends over months. Those away from a medical center, who come for relief of chronic cystitis, etc., due to stricture, although in time dilatation would perhaps be the ideal treatment, often can not submit to the loss of time, and a urethrotomy becomes imperative.

Berliner Klinische Wochenschrift: Dr. Martens, in Koenig's clinic, calls the condition stricture only where connective tissue is pronounced; inflammatory swelling is not stricture. Finds most at bulbo-membranous juncture—67 per cent. Prefers metallic bougies for sounding; prefers dilatation up to 26 to 30 F., long continued. Those that resist dilatation must be cut. The internal operation is much used in France, and lately is gaining in Germany. Catheter should be left in. In his own clinical work he always prefers the external operation. Statistics: 65 cases of dilatation, no deaths; 100 cases external urethrotomy, 8 deaths. Writer comments on lack of unity of opinion in choice of operations.

The same results may be achieved by different methods; what must be borne in mind is to avoid rough instrumentation, obtain a free outlet for the urine, and maintain a long-continued after-treatment with sounds.

External urethrotomy is at times an indispensable operation, but is often unnecessarily done. The inconvenience of the operation must also be taken into account. Good authorities claim that relapses after it occur as frequently as after any other, and dilatation is as necessary. It must be borne in mind that local anesthesia, or even no anesthesia, will

suffice for an internal operation, whereas for an external urethrotomy general narcosis is required. The combined internal and external operation is a procedure which is rising in esteem.

Arguing from my own experience, I have this to say, that stricture is at times a serious surgical malady, and at all times merits our most scrupulous care, and never should a hasty or slipshod operation be done. I say this because we often do find a lack of surgical tact and discretion, and an ignoring of ordinary precautions against infection and hemorrhage that is astounding. I prefer in all cases where a stricture is absorbable by pressure alone to use dilatation. Circumstances will compel us, though, sometimes to proceed in a more rapid manner and do a urethrotomy as a means of avoiding recurrent chills and persistent bleeding that might complicate early dilatation.

I have no particular fear in applying the conservative cutting operation to the membranous urethra. I am much opposed to making a deep incision here. It is not possible, I think, to aim at and sever all the contractile bands, as we can not tell how deep they are, compelling us to cut perhaps too deeply.

I look upon internal urethrotomy simply as a means to facilitate dilatation. The indications for external urethrotomy have been stated clearly by the extracts from the articles of Harrison and Wyeth. I believe this operation should be restricted, and feel thoroughly convinced that it is often unnecessarily done. Divulsion according to the method of Holt I have never practiced.

In closing, I will simply mention the most serious surgical interventions that the urethra is subjected to for obstructive lesions. They are: Retrograde catheterization, with an accompanying suprapubic cystotomy; the external operation without a guide; the method of approximating the cut urethra to the edges of the opening into the perineum. Fortunately, conditions meriting these operations are rare.

In my internal urethrotomies I have never encountered uncontrollable hemorrhage, and if the patient is given the attention he requires I believe that death from hemorrhage is well-nigh impossible, and could occur only in a case of hemorrhagic diathesis.

The vigorous preliminary use of urotropin has been most effective in my experience in combating urinary sepsis. I have operated upon relapsing cases occurring after external urethrotomies, having done this operation myself only when the indications were absolute.

The method of dealing with stricture by electrolysis has a few advo-

cates, but it is heartily condemned by others. I have applied the electric current myself to strictures, and have obtained some slight results. These results, however, were limited to getting through the stricture, and not productive of any real cure. Several strictures that have resisted filiform manipulation have yielded to steady pressure of a rather large blunt negative electrode, and an entrance was effected into the bladder, paving the way for further dilatation. The liberation of sodium hydroxid at the negative pole exerts a caustic effect upon the tissues, and, in my opinion, would predispose to further scar formation in an undesirable manner were the electric treatment used alone.

LOUISVILLE.

Reports of Societies.

BRASHEAR MEDICAL SOCIETY.

The regular quarterly meeting of the Brashear Medical Society was held at Bloomfield, October 16, 1901. The meeting was one of the most interesting in the history of the Society, and was well attended by the members. The visitors were Drs. A. M. Cartledge and Frank C. Simpson, of Louisville. Letters were read from Drs. Coomes, Wathen, Solomon, and Johnson expressing their regrets for not being able to attend.

President Blincoe called the meeting to order, and the regular business was transacted with dispatch, after which the following papers were read and discussed at length by all present:

Dr. Simpson read a valuable paper on "Acute Rheumatism in Children."

Dr. E. Y. Johnson, of Louisville, prepared a paper on "Heroin Hydrochlorate," which was read by Dr. Crume, of Bloomfield. Dr. Johnson maintains that the heroin hydrochlorate is an excellent substitute for morphine.

Dr. Rogers, of Taylorsville, read a paper on "A Grain of Wheat," stating that from a chemical standpoint the fancy white flour made by the patent process should be condemned, and from a physiological it is almost criminal. He urged the doctors to thoroughly investigate the subject and thereby lessen the ranks of dyspeptics, giving his own experience as a criterion to go by.

By unanimous request, Dr. Cartledge gave the Society a very interesting and instructive talk on the subject of hip-joint fracture. The Society, upon motion, gave the doctor a vote of thanks.

The President announced that would end the morning session, and that we adjourn to the Wickam Hotel, where the local physicians had prepared a sumptuous dinner for their guests.

The afternoon session was opened by the reading of Dr. M. F. Coomes' paper, entitled "The Reports of Clinical Cases," his subject being Foreign Bodies in the Air-passages; read by Dr. Smith, of Bardstown.

Dr. Shepherd, of Taylorsville, read from notes and reported several cases of typhoid pneumonia, which brought forth some timely discussion. Osler and Hare were quoted frequently, with personal experience.

Dr. Rogers read the preliminary report of Thomas J. Mays, A. M., M. D., on the hypodermic injection of silver nitrate over the vagus in the treatment of pulmonary consumption.

Drs. Shepherd and Rogers gave their experience as to giving the nitrate of silver internally in combination with Dover's powder. The results were beneficial. Dr. Rogers supplied blanks to some members of the Society, and asked them to report their results.

Dr. Pope opened the meeting by a short address.

Dr. J. J. Wakefield reported for the Committee on Arrangements, and welcomed the Society to Bloomfield.

The Society adjourned, to meet at Bardstown the third Tuesday in January, 1902.

Reviews and Bibliography.

The Practice of Obstetrics. By American Authors. Edited by CHARLES JEWETT, M. D., Professor of Obstetrics and Gynecology in the Long Island Hospital, N. Y. Second edition, revised and enlarged. Illustrated with 445 engravings, 48 of which are in colors, and 36 colored plates. New York and Philadelphia: Lea Bros. & Co.

The second edition of this work has been revised extensively. Many important changes have been made in the text to conform with recent developments. It has been enriched by new original plates in black and white and colors. It has been brought fully up to date in every particular. Great attention has been paid to details and all of the surgical work

connected with obstetrics. In fact, the book contains every thing that is known concerning the art and practice of obstetrics. The chapter on ectopic gestation is one of the most complete and thorough that it has been our good fortune to read, and remembering that there is no more important subject connected with the whole practice of obstetrics than extra-uterine pregnancy, it makes it doubly interesting and important to every practitioner to be able to secure a complete and perfect history of this whole subject, as the diagnosis and treatment of these cases are important to the human life. We know of no subject connected with the whole field of obstetrics more important than ectopic gestation—hence the great importance of every practitioner being able to at least diagnose ectopic pregnancy, because upon the prompt recognition of this condition of affairs depends the possibility of saving the mother's life.

The chapter on puerperal eclampsia is likewise an excellent one, and is therefore of equal importance to that of ectopic gestation. Certainly it is to the mother. There is no more distressing condition connected with gestation than puerperal convulsions: it strikes terror to the hearts of all concerned, and while it is not possible to prevent all cases from dying, it is the duty of every doctor to be ready at all times to combat this condition in a prompt and vigorous manner.

The chapter on puerperal infection is one of the most complete in the book, and one which every practitioner and obstetrician should have at his fingers' ends, because, first and most important of all, it is a preventable disease, and this being the case, the whole subject of asepsis especially should be kept prominently in the mind of the obstetrician. Absolute cleanliness in every maneuver connected with the lying-in state is the means of prevention of this horrible disease. When it is remembered that the germ which produces puerperal sepsis does not originate within the gestation tract except in cases where original secundines are allowed to remain until decomposition takes place, it is easy to understand that the infection is carried into the tract either upon the hands of the obstetrician or upon some instrument used by him—hence the means of prevention of this infection is equally as plain and simple to all.

The Standard Medical Manual. A Hand-Book of Practical Medicine. By ALFRED S. BURDICK, M. D., Junior Professor of Practice of Medicine, Illinois Medical College; Member of the American Medical Association, the Illinois State Medical Society, etc. 921 pp. Illustrated. Price, cloth, \$4.00. Chicago: G. P. Engelhard & Co.

This book contains more than 700 pages, and is indexed alphabetically, which is certainly an advantage over many other forms of indexing. The author says: "The work is, confessedly, in a large part a compilation, though the author's experience and judgment have been largely drawn upon in many instances. He has hoped to make it a thoroughly practical book—one which will be found a real help in the everyday work of

the average practitioner. Little attention is therefore given to theories, and no attempt has been made at 'fine writing'; it has been the effort to present the facts in as few words as is consistent with reasonable clearness.

"Since it is plainly impossible to cover the whole field of medicine in any thing like a satisfactory way in such a work, the unusual diseases and those belonging naturally to the domain of the specialist are either omitted entirely or discussed very briefly. Most space is given to the diseases with which the practitioner has most to do, such as tuberculosis, typhoid fever, diphtheria, scarlatina, pneumonia, etc. A good deal of attention is also given to the minor ailments which make up so large a bulk of the physician's practice and yet are hardly mentioned in most text-books and seldom taught in medical schools.

"No apology seems necessary for the large number of prescriptions introduced. While it is not expected or desired that the physician should make verbatim use of these, yet it is undoubtedly true that the study of carefully written prescriptions helps to impress upon the student the methods of giving drugs successfully and the advantages to be derived from their proper combination, as nothing else can, except the actual employment of such combinations, duly modified to meet individual requirements, in actual practice."

This is the first edition of this work, and it will be difficult to predict what will be the result. The author makes an apology for the unusual number of prescriptions embodied in the work. He also refers to the fact that "prescription-writing is a lost art." Certainly, those who care to look over the prescriptions indicated in certain diseases will find that this book will amply satisfy their demands. It is true that many practitioners care nothing for prescriptions, preferring to make their own formulas extemporaneously; hence, as we said before, it will be difficult to prognosticate as to how the profession will take such a book as this. Brevity marks much of the work in this book—particularly is it true of the definitions, prognosis, diagnosis, and symptoms.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, C. B., M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc., and F. F. BURGHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green. In seven volumes. Volume V, the Treatment of the Surgical Affections of the Head, Face, Jaws, Lips, Larynx, and Trachea; and the Intrinsic Diseases of the Nose, Ear, and Larynx. By H. LAMBERT LACK, M. D. (Lond.), F. R. C. S., Surgeon to the Hospital for the Diseases of the Throat, Golden Square, and to the Throat and Ear Department, the Children's Hospital, Paddington Green. Philadelphia and New York: Lea Bros. & Co. 1901.

This volume is devoted to the surgical affections of the head and face, as follows: Affections of the scalp, affections of the skull, intra-cranial injuries, intra-cranial suppuration, hernia cerebri, tuberculous meningitis, sinus thrombosis, meningocele and encephalocele, microcephalus, hydro-

cephalus, focal epilepsy, tumors of the brain, wounds, inflammatory affections, ulcers and new growths of the face, fractures of the nasal bones, affections of the lips, trigeminal neuralgia, the plastic surgery of the face, hare-lip and cleft palate, the affections of the auricular and parotid regions, fractures of the jaws, affections of the temporo-maxillary articulation, inflammatory affections of the jaws, tumors of the jaws, tumors of the nasopharynx, congenital affections, injuries, cut throat, foreign bodies in the air-passages, the operations upon the larynx and trachea, cancer of the larynx, anatomy of the nose, method of examination of the nose and accessory cavities, deformities of the nose, foreign bodies in the nose, inflammatory affections of the nasal fossæ and the sequelæ, chronic diseases of the nose, nasal neuroses, inflammatory affections of the accessory cavities of the nose, diseases of the naso-pharynx, general management of examination and treatment of the ear, affections of the external auditory meatus, affections of the middle ear, suppuration in the antrum and mastoid cells, affections of the internal ear and perceptive apparatus of hearing, general methods of examination and treatment of the larynx, inflammatory affections of the larynx, tumors of the larynx, syphilis of the larynx, tuberculosis of the larynx, neuroses of the larynx, malformations of the larynx. .

This volume is the equal of volumes that have preceded it, and well worthy of consideration of all who are engaged in surgery.

A Text-Book of Nervous Diseases. Being a Compendium for the Use of Students and Practitioners of Medicine. By CHAS. L. DANA, A. M., M. D., Professor of Nervous Diseases in Cornell University Hospital Medical College; Visiting Physician to Bellevue Hospital; Neurologist to the Montefiore Hospital; ex-President of the American Neurological Association; Corresponding Member of the Société de Neurologie, etc. Fifth edition. With two hundred and forty-four illustrations. New York: William Wood & Co. 1901.

The author, in his preface, says: "The extreme importance of a knowledge of anatomy has led me to pay especial attention to furnishing in a condensed form the most recent accessions to our knowledge of this subject. Starting with the facts that can be gained in ordinary anatomical works, the student can, I believe, acquire a good idea of modern neuro-anatomy with the help of anatomical chapters given here.

"In the classification of nervous diseases and the description of their pathology I have tried to apply the modern knowledge of general pathology as modified by bacteriology. This I have done conservatively, yet not less than in my opinion is absolutely demanded. A good deal of havoc will be wrought eventually in our conception of the nature of nervous diseases by the newer pathological doctrines; I have made as little change as was consonant with undeniable facts."

The first chapter of this excellent book is devoted to the anatomy, physiology, and chemistry of the nervous system. This, beyond all question, is one of the most important chapters in the book, although it comprises only about twenty pages. Many doctors and students, and especially the

older men, during their schooldays failed to grasp any thing like a clear idea of the anatomy and physiology of the nervous system. In fact, in their student days there was not so much known about the nervous system as there is to-day—hence every one who reads this book should read the first chapter and get an idea of the anatomy and physiology of the nervous system as taught to-day. A knowledge of the relation of the various anatomical elements entering into the structure of the nervous system is so important that without an idea of these relations the study of nervous diseases amounts to nothing—hence those of us who are not thoroughly conversant with the anatomy and physiology of the nervous system can not hope to successfully diagnose and treat any diseases which invade it.

Diseases of the Intestines. Their Special Pathology, Diagnosis, and Treatment. With Sections on Anatomy and Physiology, Microscopic and Chemic Examination of the Intestinal Contents, Secretions, Feces, and Urine; Intestinal Bacteria and Parasites; Surgery of the Intestines; Dietetics; Diseases of the Rectum, etc. By JOHN C. HEMMETER, M. D., Philos. D., Professor in the Medical Department of the University of Maryland; Consultant to the University and Director of the Clinical Laboratory, etc. In two volumes. Volume I, Anatomy, Physiology, Intestinal Bacteria, Methods of Diagnosis, Therapy and Materia Medica of Intestinal Diseases, Diarrhea, Constipation, Enteralgia and Enterodynia, Meteorism, Dystrypsia, Enteritis, Colitis, Dysentery, Intestinal Ulcers, Intestinal Neoplasms, etc. With many original illustrations, some of which are in colors. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. 1901. Large octavo, 740 pages. Price, \$5.00 per volume.

Dr. Hemmeter is well known to the medical profession as the author of a work on diseases of the stomach. He now brings to the profession a magnificent work on diseases of the intestines in two large volumes, the first of which is before us, and is an ideal of the bookmaker's art. It contains nearly eight hundred pages, and is composed of twenty-three chapters, as follows: Anatomy and histology of the intestines, anatomical aspect of the abnormalities of position and form; physiology of the intestines; absorption from the intestines; the peristalsis of the intestines; utilization of food in the stomach and intestines of the healthy man and under abnormal conditions; disturbances in the secretory functions of the intestines, the pancreas and the liver; the intestinal bacteria; methods and technics of diagnosis; diagnostic significance of examination of feces and urine; diagnostic significance of chemical and physical examination of the gastric functions for intestinal diseases; duodenal intubation; principles of dietetic treatment, the dietary prophylaxis and hygiene, special dietary prophylaxis, extrabuccal feeding, rectal and subcutaneous alimentation; methods and means of treatment; diarrhea; obstipation or constipation, coprostasis; intestinal colic, enterodynia; meteorism, tympanites; intestinal indigestion, dystrypsia intestinalis; enteritis (intestinal catarrh); dysentery; ulcers of the intestine; intestinal neoplasms.

This work is of great value to the general practitioner, as it relates especially to the medical treatment of diseases of the alimentary canal, and

for that if no other reason it becomes valuable to the general practitioner, who of necessity comes in contact more frequently with the diseases of the alimentary canal. It is likewise of great value to the surgeon, because many surgical cases are medical cases as well. The whole subject of rectal and subcutaneous feeding is considered in detail. The waters of mineral springs are also considered in a special chapter. The book taken as a whole is one of the most valuable that has been presented in years, inasmuch as the diseases of the alimentary canal are properly classified, and the diagnosis and all complications connected with each special disease have been detailed. We predict for it a large and rapid sale.

A Text-Book of Medicine for Students and Practitioners. By Dr. ADOLF STRUMPELL, Professor and Director of the Medical Clinique at the University of Erlangen. Third American edition. Translated by permission from the thirteenth German edition by HERMAN F. VICKERY, A. B., M. D., Instructor in Clinical Medicine, Harvard University; Visiting Physician to the Massachusetts General Hospital; Member of the Association of American Physicians; Fellow of the Massachusetts Medical Society; and PHILIP COOMBS KNAPP, A. M., M. D., ex-President of the American Neurological Association; Clinical Instructor in Diseases of the Nervous System, Harvard University; Physician for the Diseases of the Nervous System, Boston City Hospital; Fellow of the Massachusetts Medical Society, etc. With editorial notes by FREDERICK C. SHATTUCK, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University; Visiting Physician to the Massachusetts General Hospital; Member of the Association of American Physicians; Fellow of the Massachusetts Medical Society, etc. With one hundred and eighty-five illustrations in the text and one plate. New York: D. Appleton & Co. 1901.

The fact that this book has gone through the thirteenth German edition and the third American edition is the very best evidence of its value, as a book that has run through thirteen editions under the review of such critics as Germany possesses is certainly well worthy of consideration. The translators have added a chapter on the plague, and have made such changes as they deemed necessary to meet the indication of advances in medicine. The department of the work devoted to nervous diseases is one of the most complete of the whole book. This chapter alone is a book in itself.

Notes on the Eye. For the Use of Undergraduate Students. By FRANK LARAMORE HENDERSON; M. D., Professor of Ophthalmology in the Barnes Medical College, St. Louis, Mo.; Ophthalmic Surgeon to St. Mary's Infirmary, the Centenary Hospital, and the Christian Orphans' Home; Consulting Oculist to the Wabash Railway and to the Terminal Railway Association; Member of the Missouri State Medical Association; Vice-President of the St. Louis Medical Society, and Secretary of the St. Louis Medical Library Association. Second edition. St. Louis: Nixon-Jones Printing Co. 1900.

This is a little manual of some 150 pages. It is intended for students, and of course does not go extensively into the science of ophthalmology, simply giving the gross anatomy of the eye and the consideration of the most common diseases of the eye met with in practice.

A Text-Book of Ophthalmology. By JOHN W. WRIGHT, A. M., M. D., Professor of Ophthalmology and Clinical Ophthalmology in the Ohio Medical University; Ophthalmologist to the Protestant Hospital, Columbus, Ohio; Member Ohio State Medical Society; Member American Medical Association. Second edition, thoroughly revised. With 117 illustrations. Philadelphia: P. Blakiston's Son & Co. 1901.

The author, in his preface, says: "Particular endeavor has been made to place before the profession the latest and most improved treatment for many affections of the eye which usually come first to the attention of the general practitioner, and which he may, as a rule, diagnose and treat to a successful issue. Such affections particularly referred to are the purulent ophthalmias, conjunctival granulations, corneal ulcer, interstitial keratitis, iritis, and glaucoma, any of which, if neglected in the incipency of the affection, often results in irremediable blindness.

"As refractive errors and insufficiencies of the ocular muscles are now acknowledged to be the cause of many distressing nervous affections, particularly hemicrania, chorea, insomnia, etc., plain and simple but practical tests have been devised with which the physician may readily ascertain if there exists an ocular defect, when, if it is not within his province to apply the proper remedy, he may refer his patient to one who is competent to perform such service."

The chapter on refraction is to be commended because of the great simplicity to which it has been reduced in this work. The how and the why have been detailed to a great degree in this chapter, which is well worth the price of this whole book.

Holden's Anatomy. A Manual of the Dissection of the Human Body. Edited by JOHN LANGTON, Surgeon to and Lecturer on Anatomy at St. Bartholomew's Hospital; Member of the Board of Examiners, Royal College of Surgeons of England; Surgeon to the City of London Truss Society; Consulting Surgeon to the City of London Lying-in Hospital and to the Memorial Hospital at Milmay Park. Seventh edition. Revised by A. HAWSON, M. D., Demonstrator of Anatomy, Jefferson Medical College, Philadelphia; Professor of Anatomy, Philadelphia Polyclinic for Graduates in Medicine; Surgeon to St. Timothy's Hospital; Dispensary Surgeon, Episcopal Hospital; Member Association of American Anatomists; Fellow of the College of Physicians, etc. In two volumes. Philadelphia: P. Blakiston's Son & Co. 1901.

This excellent work has been issued in two volumes instead of one as formerly. The author, in his preface to the sixth edition, says: "The chief feature of Holden's Anatomy that must have become apparent to all who have hitherto used it, is not only that the text has been made so concise, but that the subject is presented in as clear and practical a light as is compatible with the faithful handling of its natural difficulties. It gives to the beginner a proper method of procedure, together with such details as are essential to the thorough understanding of the matter in hand. In making this revision the editor has worked in accord with the previous editions, and has made such additions and alterations as seemed neces-

sary to bring the book in line with present knowledge and methods, and has added the metric measurements side by side with the English."

This is by all odds one of the most thoroughly practical works that has been presented to the medical profession. It is the book for demonstrators and the book for students to use in the dead-room. It is thoroughly practical in every particular, and no words of ours could add any thing to its great value. We can only commend it to our readers as being one of the most excellent works of its kind. It can be purchased for \$1.50 per volume.

Human Physiology. Prepared with Special Reference to Students of Medicine. By JOSEPH HOWARD RAYMOND, A. M., M. D., Professor of Hygiene and Physiology in the Long Island College Hospital, and Director of Physiology in the Hoagland Laboratory, New York City. Second edition, entirely rewritten. Philadelphia and London: W. B. Saunders & Company. 1901.

The second edition of this work has been entirely rewritten and contains 443 illustrations, some of which are in colors, and four full-page lithographs. It has been the effort of the author to classify and arrange this work in such a way that the student may consult the book with the least amount of labor. Important paragraphs are headed with large type, and important subjects also in the same way—hence it is not only well indexed, but the subject-matter is so arranged as to give the least amount of trouble in ascertaining what is desired. All excessive verbiage has been eschewed, thus saving an unlimited amount of time in the consideration of a subject so extensive as that of physiology. The careful perusal of this book shows conclusively that the author and publisher alike have spared no pains whatever in placing before the medical profession a most excellent book—thoroughly practical in every detail, and we feel free to say that no better text-book upon the subject of physiology has ever been presented to the profession than this work.

A Treatise on Diseases of the Nose and Throat. By ERNEST L. SHURLEY, M. D., Vice-President and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine; Laryngologist and Late Chief of Staff, Harper Hospital; Consulting Laryngologist and Chief of Laryngological Clinic of St. Mary's Hospital; Consulting Laryngologist to the Woman's Hospital and Foundlings' Home; Member of the American Laryngological Association; of the American Climatological Association; of the American Medical Association; of the Michigan State Medical Society, etc. New York: D. Appleton & Co. 1900.

This volume contains more than 700 pages, and is a thoroughly and handsomely illustrated work, and in every way an ideal of the bookmaker's art.

The author, in his preface, says: "The volume has been prepared for the perusal of the general practitioner and medical student rather than for the specialist in laryngology. It has therefore been the intention of the author to present more particularly the ideas and facts pertaining to the

various subjects from the standpoint of practical experience or observation. To this end he has refrained from speculating upon unimportant theories and superfine distinctions, while at the same time endeavoring to give both sides of important controversies.

"The therapy of the diseases described has received especial attention in as concise a manner as possible, while at the same time affording a sufficient range for indicating different plans of treatment. For the convenience of ready reference, an extensive formulary and chapter on local treatment will be found in the latter part of the book."

The operations on the nose and maxillæ have been excluded for the reason that they belong to the domain of general surgery. The book gives every evidence of careful study in its preparation, and it is a work that the author may well be proud of, and likewise the profession. Dr. Shurley is a conscientious and judicious practitioner, and therefore the ideas set forth in his book are the results of his actual experience; hence the book is composed of clinical facts as observed by him at the bedside. Those wishing to buy a good practical work on the nose and throat can do no better than to purchase this one.

Anatomy : Descriptive and Surgical. By HENRY GRAY, F. R. S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School. Edited by T. PICKERING PICK, F. R. C. S., Consulting Surgeon to St. George's Hospital and to the Victoria Hospital for Children; H. M. Inspector of Anatomy in England and Wales; and ROBERT HOWDEN, M. A., M. B., C. M., Professor of Anatomy in the University of Durham; Examiner in Anatomy in the Universities of Durham and Edinburgh, and to the Board of Education, South Kensington. A revised American from the fifteenth English edition. Philadelphia and New York: Lea Brothers & Co. 1901.

If there is any thing in anatomy that has not been demonstrated aside from the complex structure of the nervous system, we are not aware of it, and to say that Gray's Anatomy contains any thing new would be misrepresenting the facts. However, it may be said that this is without a doubt the most complete work on anatomy published in the English language. Its arrangement and illustrations are not to be excelled. Time and again other books have been placed before the profession, but each time they have been rejected, and Gray's Anatomy still remains the text-book of all the medical students, and will doubtless remain so indefinitely. No book will ever take its place before the examining boards of this country—it will be their standard. No words of ours could add any thing to this excellent work; it stands as a monument to its author.

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This journal is devoted solely to the advancement of medical science and the promotion of the interests of the whole profession. Essays, reports of cases, and correspondence upon subjects of professional interest are solicited. The Editors are not responsible for the views of contributors.

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LOUISVILLE HEALTH DEPARTMENT.

Mr. Grainger, the Mayor-elect, has shown his wisdom by continuing Dr. M. K. Allen as chief health officer. Dr. Allen has demonstrated very positively his thorough fitness for the office which he fills. It is not a matter of dollars and cents with Dr. Allen that makes him so much interested in the Health Department as it is his interest in medicine and in the beautiful city which is the home of his adoption. Dr. Allen is a man of good executive ability, and understands thoroughly the needs of the city's Health Department. Heretofore he has been handicapped for the want of proper assistance. Dr. Allen, in his annual report of the Health Department of the city, says: "There should be appropriated annually a sum not less than twenty thousand dollars for the maintenance of Louisville's Health Department, and I earnestly urge that this amount be allowed for this purpose the coming year.

"I have urged the adoption of many sanitary reforms and methods during the past three years, which I am sorry to say have not met with favorable consideration. This is illustrative of the fact that municipal authority is not, as a rule, acquainted with the benefits to be derived from the application of scientific methods, which can be applied only by health departments.

"Municipal sanitation being one of the most important, if not the most important question of this age, it is obvious that sanitary education should be required everywhere, in the public schools, in the high schools, colleges, and universities, so that by the time the younger generations mature, enlightenment will not only have reached our various legislative bodies, but the people generally, and thus will all come to realize that the human family can be made healthier and happier, and death made more remote.

"In this connection I think it proper that I should suggest that, after an experience of nearly four years as Health Officer of this city, it is my opinion that in order that we may have a thoroughly efficient and well-equipped Health Department, an appeal should be made to the next General Assembly of this State to make such a change in our city charter as will permit of the enactment of a statutory law providing for the establishment of a city board of health, with independent powers, with authority to institute all proper rules and regulations for the enforcement of sanitary measures.

"The suggested legislation should embrace a special taxation, similar to the school tax, for separate maintenance, and should be sufficient to create a fund equal to at least twenty-five thousand dollars per annum. Branches of the city government whose duty embraces sanitary features should come within the scope of the health legislation referred to.

"It should be also perfectly clear to all that municipal legislation should not be exposed to an unnecessary risk by politics, and that the municipal health officer should be selected because of qualification and peculiar fitness for the position, with secure tenure of office and proper compensation.

"It is my firm conviction that if these suggestions were only materialized, our death-rate from preventable diseases would be materially lessened, and that much sickness and suffering could be avoided. The most important department connected with the Health Office is that of a well-arranged chemical and bacteriological laboratory, and while it may seem to the general public a useless expense, it is certainly the best investment that can be made. Nothing is more important to the community than pure drinking-water and pure food-stuffs. The analysis of water and milk, the latter being the food of so many infants, is a matter of great importance, and it requires an expert to do this work. The milk that each dairyman brings to town should

be examined not less than every fourteen days. This of course requires a great deal of time, but where it is the work of one man who depends upon a salary for his living it can be well and properly done, and by this means the people of Louisville will know just what they are purchasing when they buy milk. As it is, I am sorry to say, much of the milk is of very inferior quality, and those persons who buy it and then sell it are the chief adulterators, using all sorts and kinds of mixtures to increase the quantity of the milk by the use of water and still retain the specific gravity and general appearance. The public is perfectly willing to be taxed for any thing that will better its condition—hence we see no reason why the Legislature of Kentucky should not make the necessary changes in the department of the city of Louisville so as to make the office non-political and to levy taxes for sanitary purposes, and fix a salary for the health officer, chemist, and bacteriologist, the two latter offices to be held by one man. The health officer should also have the power of appointing his inspectors, thus making the office absolutely non-political. When this is done, Louisville will have a first-class health office and will be one of the healthiest cities in the United States.”

Current Surgical and Medical Selections.

CANCER OF THE BREAST.—Banks (*Lancet*), in speaking of the operations for cancer of the breast, says of the very radical and extensive operations, that he does not believe it necessary to remove the sternal portion of the pectoralis major and to divide the pectoralis minor and reflect that muscle in order to remove all the glands of the axilla. If the arm be properly manipulated and the great pectoral well dragged upward and inward the very topmost point of the axilla can be cleaned out. Moreover, if there is any doubt at all, the great pectoral can be cut across with very little trouble and then stitched together with catgut sutures, as he has frequently done. With an experience of 250 operations he has given up attempting to get any good out of cleaning out the supraclavicular region. When cancer has laid hold of the supraclavicular glands it has got such a grip as to be past extirpating. It is like a burning house—when the fire is beginning even some buckets of water will put it out; when it has got to a certain pitch a whole fire brigade will not quench it. It is clear that in both classes of operation the majority of fatal cases die from internal metastases without external recurrence, and against these no operation can protect. The swing

of the pendulum of surgical opinion is generally too extreme, and has now turned from too slight to too extensive operating. The author has never seen a recurrence in the small pectoral muscles; in the great they creep into it from the subcutaneous tissues and pectoral fascia. They do not primarily originate in the muscle. There is, therefore, no need for its removal on that ground.

The operation which he advocates is one in which an elliptical incision wide of the tumor and of the entire breast is made, with an undercutting, so that the subcutaneous tissues are removed over even a more extensive area than the skin; it reaches even to the sternum. The skin should be particularly freely removed on the side on which the seat of the growth lies. He believes its extension is frequently through the skin, and it is in the skin that most external recurrences are found. The axilla should be opened by an incision just under the edge of the great pectoral, and the whole gland and contents of the cavity, as far as they can be held together, carried away in one mass. The importance of this lies in the fact that recurrence in the axilla takes place for the most part not in the glands that are left behind, but in fragments of lymphatic vessels. A good plan is to get hold of the axillary vein, and then there is nothing else to trouble about. One must take matters very patiently, getting every thing out of the cavity that can be got and cleaning up the digitations of the serratus magnus. He uses no knife in the axilla, but two very long, strong pairs of dissecting forceps and curved probe-pointed scissors. He makes a drain-hole just above the edge of the latissimus dorsi in the lower flap, and puts gauze drains through it and also in the upper angle of the axilla. He employs asepsis, pouring hot water over the wound frequently during the operation, and sees that the wound is dry of blood.—*American Journal Medical Sciences.*

CACODYLIC ACID, A NEW ARSENICAL PREPARATION.—One of the most important of the compounds of arsenic with alcohol radicles is cacodyl, $\text{As}_2(\text{CH}_3)_4$, a colorless liquid with disagreeable, garlic-like odor, and very poisonous. Cacodylic acid, $\text{As}(\text{CH}_3)_2\text{OOH}$, is a white crystalline substance, soluble in water, odorless, and comparatively non-poisonous, although containing about 54 per cent of metallic arsenic. For this reason cacodylic acid and its sodium salt have recently been recommended as a means whereby large doses of arsenic may be administered for prolonged periods. The arsenic, however, appears to be in a peculiar combination no longer poisonous, so that it must be regarded as doubtful whether its therapeutic action is comparable with that of other arsenical salts. The following are some of the more recent reports on the results obtained from its administration. Renant (Medical Press, February 14, 1900) speaks highly of its tonic action on nutrition and its non-irritating effect on the stomach, and recommends it in the failing nutrition associated with the onset of tuberculosis. The dose is from 2 to 4 grains, but a single dose of 15 grains has been given without unpleasant effects. Widal, at a meeting of the *Societe Medicale des*

Hôpitaux, March 2, 1900, stated that he had treated cases of tuberculosis and leucocythemia with sodium cacodylate, and found that the appetite was increased, and the general condition in a marked degree improved. He administered the drug subcutaneously in doses of from $\frac{3}{4}$ grain to $1\frac{1}{2}$ grains. He also stated that there was a rapid increase in the number of the red blood corpuscles as the result of its employment in this way. M. Gautier also preferred the hypodermic method of administration of the drug. Given by the mouth, he thought the drug was decomposed in the stomach, imparting to the breath an offensive garlicky odor, and leading to the elimination of irritating products by the kidney. Zenner (*New York Medical Journal*, March 3, 1900) reports two cases of anemia in which he administered cacodylic acid with successful results after other hematinics had failed.

The consensus of opinion thus far is in favor of the value of the drug when given hypodermatically, and it has the great advantage over other arsenical preparations that when administered in this way it gives rise to almost no pain.

Prof. Gautier's formula for subcutaneous injection is:

Cacodylic acid, 5 grammes.

Saturate exactly with sodium carbonate; then add

Cocaine hydrochloride, 0.08.

Creosote in alcoholic solution, .30.

Boiled or distilled water to make 100 c.c.

Each cubic centimeter contains five centigrammes of cacodylic acid.

Montreal Medical Journal.

DIETETIC TREATMENT OF DILATATION OF THE STOMACH.—Instead of the dry diet usually imposed, Albu (*D. Med. Woch.*) considers fluid diet indicated in cases of dilatation of the stomach, as the anatomic affection should not be taken into account as much as the disturbance in the physiologic function. He establishes it as a general principle that "the food should be food, and should be fluid." The ingestion of non-nutritious fluids, watery soups, etc., must be strictly forbidden. Milk should be given freely, rendered appetizing in every possible way. Meat should be finely chopped or given in jellies. Toast is not necessary; all bread, etc., is best dipped in milk. Beef, pork, and all fats should be avoided, except a small amount of pure butter, not over 30 gm. a day. The meals should be as limited as possible and follow each other, just avoiding interference with the last. The diet outlined is a cup of milk and two rolls at 8; at 9, a cup of cream; at 10, two soft eggs; at 11, a cup of cocoa with milk; at 12, a saucer of cereal food; at 1, one-quarter pound of sweetbreads and three tablespoonfuls of spinach; at 3, a cup of milk; at 4, a cup of chocolate and a zwieback; at 5, a cup of cream; at 6, a saucer of oatmeal soup with egg and plasmon, or four tablespoons of minced meat; at 7, soup with egg and a roll; at 8, a cup of milk, and another at 9. After lavage of the stomach

morning and evening, he administers, through the sound, a mixture of plasmon, condensed milk, etc., representing a food value of one hundred calories. After each meal the stomach is massaged, which strengthens the musculature and stimulates peristaltic movements. If there is great debility the patients stay in bed. Albu's experience includes fifty observations. In many cases of extreme stenosis the subjects increased in weight, and operation could be postponed indefinitely.—*Journal Am. Med. Association.*

VENESECTOMY IN HEAT-STROKE.—Klein (*Münch. Med. Woch.*) relates a case of heat-stroke occurring in a strong, abstemious, and notoriously healthy coal-passenger on a transatlantic steamer, who had been ordered to temporary duty in the stoke-room, and who after complaining of inordinate thirst suddenly collapsed and became affected with violent general convulsions. A cool sea breeze and iced applications procured no relief, while chloroform inhalation was desisted from on account of respiratory disturbances. Convulsive movements increased to such an extent that four vigorous sailors were unable to control the patient. In less than fifteen minutes the strong, hard pulse became alarmingly weak, while consciousness did not return and the heart was beating at a vertiginous rate. Cyanosis increased, respiration was extremely laborious, the now filiform pulse became intermittent—patient was plainly dying from acute edema of the lungs. Klein had recourse to venesection (220 grammes, a little over 7 fluid ounces), which produced immediate relief; the pulse improved, respiration became normal, convulsions gradually disappeared, and patient went into a profound sleep which continued for ten hours, and from which he awoke a weak but convalescing man. He resumed work inside of a week.

In the treatment of heat-stroke chloroform inhalation was warmly recommended by Korfer in 1893. It was tried here and promptly abandoned, in view of threatening circulatory and respiratory phenomena. Binz, in 1895, also advised subcutaneous injections of bismuriate of quinine, warm baths, and injections of normal saline solution. The urgent symptoms occurring in this case, however, precluded any possible recourse to such means, and Klein considers that venesection literally saved the patient's life.—*The Medical Age.*

CAUSES OF DEATH.—A leading life insurance company has recently published its monthly records covering a period of fifty years. Notwithstanding the utmost care is observed in securing only good risks, free from organic diseases, the cause of death in the insured and uninsured is probably much alike. Out of 44,963 deaths, a trifle over one eighth (5,585) were from tuberculosis. Almost the same number (5,542) came from apoplexy, softening of the brain and paralysis, which are kindred maladies, if not practically identical. To disorder of the heart are credited 4,839 deaths (one ninth); to the digestive apparatus, 4,584 (over a tenth); pneumonia, 4,062 (an eleventh); violent causes, 3,337; Bright's disease, 2,997; typhoid

fever, 1,712; nervous diseases, not specified, 2,306; ill-defined and obscure cases, 1,768; and other recognized maladies, 5,450.

When the deaths from the causes just enumerated are divided into the three periods, the age of forty-five and under, from forty-five to sixty, and above sixty, some striking facts are brought out. Among the insured 50 per cent of the deaths from violence (accident or intentional assault), 59 per cent of those from tuberculosis, and 68 per cent of the total typhoid cases, occur in the first period. On the other hand, 47 per cent of the mortality from Bright's disease, 55 per cent from apoplexy and paralysis, and 56 per cent from heart disease occur after sixty. Mischief from the digestive apparatus is fairly well distributed, 30 per cent of the deaths occurring in the first period, 38 per cent in the second, and 32 per cent in the third.—*The Medical Times*.

THE TREATMENT OF ARTICULAR RHEUMATISM.—Dott F. Battistini, while regarding the salicylates as the most trustworthy remedies, is not insensible to their disadvantages. Better known, and at the same time inconveniences of minor importance, are digestive disturbances, varying from heaviness in the stomach to nausea and vomiting. Various exanthemata, morbilliform and scarlatiniform erythema, erythema nodosum, urticaria, vesicular pemphigoid eruptions, and, rarely, in marasmic individuals, purpura may appear. Hyperidrosis is noted in about 68 per cent of patients. Hemorrhage is of comparatively recent occurrence with sodium salicylate—epistaxis, hematuria, entorrhagia, metrorrhagia, and menorrhagia. Various nervous symptoms have been observed, notably delirium. Dyspnea merits especial attention, and is produced by direct action on the respiratory centers. Symptoms referable to audition occur in about 60 per cent of urticarias. For diminishing the last, ergot or ergotin have been proposed, but do not give satisfactory results. For preventing gastric disturbance, weak solutions of the remedy should be employed, or alcohol added in small quantity; or the remedy may be associated with sodium bicarbonate of Vichy and given apart from the meals. Many instances of intolerance can be circumvented by rectal administration, high enema, well diluted, and with a small amount of tincture of opium.—*Rivista Critica di Clinica Medica*.

THE PARASITIC NATURE OF ECZEMA.—Scholtz and Raab (*Annales de Dermatologie et de Syphiligraphie*, 1900, No. 4), in a bacteriological study of sixty cases of eczema representing the principal stages of the affection, found the staphylococcus pyogenes aureus almost constantly present. This micro-organism was not only found in the serum of moist eczemas and in the scales of the squamous forms, but had penetrated the tissues.

Kreibich (*Ibid.*, 1900, No. 5) concludes from his researches that idiopathic papulo-vesicular eczema, such as has been defined by Hebra, as well as the acute exacerbations in chronic eczema, appear independently of all

microbic intervention. Nevertheless, after a longer or shorter time the vesicles are invaded by pyogenic micro-organisms which provoke a rapid diapedesis, and transform the serous vesicles into pustules. Attempts to produce acute eczema either by the inoculation of serum from oozing eczematous surfaces, or of cultures of the microbes met with in suppurating vesicles, were unsuccessful.

Veillon (*Ibid.*, 1900, No. 6) concludes that the existence of a specific parasite of eczema is not yet demonstrated. The pure, primitive lesions of true eczema do not contain any microbe discoverable by any of the present methods known to bacteriology. The various microbes, in particular the staphylococcus, which grow abundantly in the open vesicles or on the oozing or crusted surface of eczema, are secondary infections whose direct rôle is not yet elucidated, but which are the cause of most of the complications of eczema, such as furuncle, abscess, folliculitis, etc.—*The American Journal of the Medical Sciences.*

Special Notices.

SANMETTO IN HYPERTROPHIED PROSTATE AND IN IRRITABILITY OF BLADDER.—I put Sanmetto to a very thorough trial, thinking as I prescribed it, "now I will see." I have case in old gentleman suffering from hypertrophied prostate, of long standing; had been giving "elix. saw palmetto comp.," etc., substitutes of Sanmetto, I take it, but with little benefit. Had advised castration as only method of relief. But to my pleasure, and I may say surprise, I noticed some little benefit following administration of a bottle of Sanmetto; bought another bottle, eight ounces, gave that, and am giving it now with decided benefit. I gave another bottle of it to a patient who had been taking huge doses of kissengen and vichy salts for obesity, on advice of another physician, until he had produced an irritation of his bladder almost beyond endurance. Two days' treatment with Sanmetto relieved him nicely, and a tablespoonful per day now controls it. I shall in future use only the "real thing"—no more substitutes of Sanmetto for me.

Elkhorn, Mont.

EDGAR I. BRADLEY, M. D.

WORTHY AND SEASONABLE.—When the temperature of the body is above normal conditions are especially favorable for germ development. It is a matter of every-day observation that a simple laxative is often sufficient to relieve the most threatening situation and prevent the most serious complications. To reduce fever, quiet pain, and at the same time administer a gentle laxative and strong tonic is to accomplish a great deal with a single tablet. We refer to laxative antikamnia and quinine tablets. Among the many diseases and affections which call for just such a combination, we might mention la grippe, influenza, coryza, colds, chills and fever, dengue and malaria, with their general discomfort and great debility. We would also especially call attention to the wide use of antikamnia and codeine tablets in chronic or semi-chronic pulmonary diseases. The following concise statement from Dr. W. B. Morford, No. 1521 Tasker Street, Philadelphia, is worthy of note. He says: "I find antikamnia in combination with codeine to be almost a specific in the coughs of phthisis. In a recent case of 'old-fashioned' or catarrhal consumption I obtained most satisfactory relief for the patient from a most distressing cough with antikamnia and codeine tablets."

THE AMERICAN PRACTITIONER AND NEWS.

"*NEC TENUI PENNĀ.*"

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NO. 12.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Articles.

EMOTIONAL OR IMPULSIVE INSANITY.*

BY EWING MARSHALL, M. D.

CASE I. A young woman, twenty-five years old, had been a hard student, and was just finishing at college when she broke down physically. She became morbid; acted a little queerly after convalescence set in, but the family never thought much of it at first. Then she began to talk queerly about men, especially to the old family servant woman. Then she took an aversion to her male cousin who lived in the house. She called at my office first late one Saturday afternoon and acted so queerly that I asked who her physician had been. She mentioned a prominent doctor, and I advised her to consult him, and dismissed her. The next evening she called, saying her doctor was out of town and she had stopped in the late Dr. Scott's office, and he had prescribed for her. I advised her to take his medicine. About 2 o'clock the next morning she rang my front door-bell. I looked out the window and asked who was there. She stepped out into the moonlight and said she wanted me to come down. I saw she had on only her nightgown. I told her to go home and send her father around to see me. She turned and ran home, a distance of about one block. A half-hour later my bell was rung furiously, and her sister called up to me to come to the house, that her sister was killing her father. I hurried around there, and the girl acted like a frightened wild animal, but allowed me to lead her up to her room. She pleaded with me to have

* Read before the Louisville Clinical Society, October 22, 1901. For discussion see p. 464.

intercourse with her. She said she would pray, and then she would turn over on her face and mumble to herself. Then she told me God said that she needed it, and that He would not count it as sin. The family hung around the doors, but she would not let any but the old servant woman come into the room. One time when I took my eyes off of her for a minute she clutched at my neck, and in dragging her hand off she tore my neck with her nails. Next day in conjunction with Dr. George W. Griffiths we had her declared insane and sent to the Lakeland asylum.

The family history shows a nervous temperament, but I could learn of no insanity on either side. The father and mother, so far as I could discover, have always been hard-working, temperate, law-abiding citizens.

CASE 2. A woman of a lower class than the first, twenty-nine years old, who up to her twenty-fifth birthday was thought to be a moral, upright, and deeply religious girl. But about twenty-five she began running after men, and gave birth to an illegitimate child about her twenty-sixth birthday. This child lived only a few weeks. When the child died her whole nature seemed to change. She began to abuse her family, use foul language, lie around on the commons with men. However, she had temporary improvement when she conceived again. She gave birth to a second illegitimate child. As long as this child lived she behaved fairly well, but it lived only a short time, when she became periodically more and more violent. The neighbors reported that she would stand at the windows and throw her clothes up to her head, and make all kinds of demonstrations to passing men. This terrific desire seemed to come in waves, and if she was prevented from getting out and satisfying herself she would wail and carry on like an enraged wild animal until her passion would subside. Again sometimes after she had been out for hours with men she would return in the wildest frenzy. In one of her frenzies she kicked her mother against a hot stove. In another she made after her mother with a scythe. And still another time she ran her sister-in-law with a pick-axe. Each time if she had not been prevented she would have done them serious injury. The family history in this case is bad. Father died of some nervous disorder. For a long time prior to death he was an imbecile. One brother is in an insane asylum. They are people of low moral ideas generally. This girl was tried, and, in conjunction with a professor of nervous diseases at one of our colleges, I tried to have her

sent to the insane asylum. The court decided she was not crazy, and simply bound her over, I believe, to keep the peace.

CASE 3. Dr. Barbour is more conversant with this case than I, and I hoped he would be here to discuss it. A. R. is twenty-six years of age. Was sent to Lakeland in 1891 for exhibiting violent temper; was adjudged uncontrollable. During the last nine or ten years she has been roving from place to place. Claims she is not able to work on account of spinal trouble; nearly every person with whom she has been, pronounces her a nuisance. Her actions, since she has been in the Home of the Friendless, show signs of an impaired mind—walking during the night, sleeping only two or three hours, talking to herself, shunning company, threatening to kill herself; talks incessantly about her friends and relatives mistreating her. Her general conduct is such that the girls are afraid of her. The question has been put to me, what to do with her. Dr. Barbour told me he would not call her crazy, but only a crank.

I class these cases as nymphomaniacs, and think the State should have the custody of them, since "the object of all law is the protection of the public." The individual must even be sacrificed for the good of the race. According to the best authorities, nymphomania in the female and satyriasis in the male, when joined with other evidences of mental or nervous disorder, constitute one form of impulsive insanity.

Prognosis unfavorable as to permanent cure. Temporary improvement is the rule. When this trouble is conjoined with kleptomania, prevarication, quarrelsome temper, etc., in other words, in proportion as the evidence of general mental obliquity is increased, the graver the prognosis, and in pronounced cases the experience of alienists is that should improvement of the general health cause the prominent mental derangement to subside, other marked indications of cerebro-mental disorders are pretty certain to appear sooner or later. The pathology of these disorders is still wrapt in mystery.

Etiology. With the alienists heredity occupies the foremost place, many maintaining that without the hereditary tendency they would not arise.

"In a brief but important communication to the French Congress of Alienists and Neurologists made by Dr. Bourneville of the Bicêtre, Paris, and published in the *Revue Neurologique* of August 30th, it is stated that out of a total of 2,072 boys suffering from chronic diseases of the nervous system (idiocy, imbecility, epilepsy, and various paralyses),

the presence of hereditary syphilis was ascertained in 20 cases, or about 1 per cent. Among 482 girls there were only two cases of hereditary syphilis, or 0.2 per cent. Alcoholism, on the other hand, was a more prolific cause of disease, its presence being traced in over 40 per cent of the cases. Thus of the total number of patients, both male and female, the family histories showed that in 36.5 per cent of the cases alcoholic intemperance was present in the father and in 3.0 per cent in the mother, while in the rest—viz., 1.5 per cent—it was found in both parents. Among the unhealthy occupations in which the parents of the patients were engaged were the making of phosphorous matches, working in copper and in mercury, and especially the manufacture of white lead." (Lancet.)

Predisposing Causes. 1. Physiological—Puberty, maternity, menopause, and senility.

2. Toxic—Alcohol and drugs.
3. Morbid conditions producing nervous effects.
4. Primary disease of nervous system.
5. Injuries to nervous system.
6. Mental and physical strain.

In a quotation from an article on Recurrent Insanity, by Hugh Kerr, I find these statements: "That the majority of attacks occur in middle life; the first attack, however, is most frequent in the adolescent period, and is later in males than in females.

"The prevailing forms of insanity are maniacal, melancholic forms being almost restricted to the middle period of life.

"That the tendency is toward recovery, minor relapses being frequent before complete convalescence.

"That the largest proportion of chronic cases is found in second attacks.

"That in many of the cases a certain periodicity is established, the tendency, however, being toward chronic insanity. This class of patients furnishes many who are dangerous to themselves and others—a danger which is increased by the impulsive character of their acts and the frequent absence of marked premonitory symptoms before the onset of the attack."

Treatment. Prophylactic and curative: Prophylactic treatment should be begun with the birth of the baby. It should be taught self-control when it is first put to the breast. Both mental and physical repression should be drilled into the being from the cradle to the grave.

I believe the chief cause of the failure of any animal to attain its greatest usefulness is the lack of an appreciation of its own responsibility. Don't care is a liar, and is the corrupter of all the higher instincts. Our duty in the lying-in-room should impel us to instruct the young mother in the fact that a child gets nothing in this world but heritage and rearing. And while I am convinced of the fact that "you can not make a silk purse out of a sow's ear," yet by skill and labor you can take an ordinary piece of wood and make a very useful article.

Curative: Improved hygiene, constructives, tonics, codliver oil; simple, non-irritating diet; as nearly as possible open-air life; exercise, both mental and physical, pushed judiciously; removal from suggestive surroundings and associations.

Surgery at one time was thought highly of, but the removal of the ovaries and uterus or the testicles has proved a gloomy failure. In some cases apparent improvement has followed upon trephining the skull and leaving out the button. Counter-irritation has been tried. Lalanne reports a case of acute mania cured by a large carbuncle on the neck. Setons were formerly used for nervous disorders.

The medico-legal side of the subject is one that interests me considerably. We know how the medical expert has been ridden to assist in murder cases. Yet I take it that we should not from fear of ridicule or censure hesitate to lend our aid to the State to carry out its laws. I certainly believe in emotional insanity, but am staggered by the question as to the best way to meet it. I hardly think we err on the side of cruelty when we consent to the destruction of fanatics like Guiteau or Czolgosz, but does the same rule hold good where a person in a fit of frenzy, brooding over real or imaginary wrongs, takes life? Shall they be destroyed or permanently confined? But, on the other side of the case, I am convinced that where an individual of more or less mental obliquity shows homicidal tendencies, they should be at once put under control to prevent their doing harm either to themselves or others, rather than wait until they have actually taken life. Again, I think great care should be used before a person who has once shown homicidal tendencies and been confined in an asylum should be turned loose upon the community.

LOUISVILLE.

FACTS VERSUS FALLACIES IN THE PRACTICE OF RECTAL DISEASES.*

BY A. B. COOKE, A. M., M. D.

Clinical Professor of Proctology, Medical Department Vanderbilt University; Secretary Tennessee State Medical Society; Fellow American Proctologic Society, etc.

Mr. President and Gentlemen: Properly speaking, no man is entitled to an opinion as to the existence or non-existence of a gross anatomic structure. The facts of anatomy are as definite and indisputable as any other facts within the realm of matter, and as such they permit of demonstration to every mind which is open to the truth and capable of apprehending it. I rejoice to believe that the science of medicine possesses at least this one element of certainty, and that no man's opinion or denial can change or modify it.

In the pursuit of truth the "views" of individuals upon a controverted point are to be valued, not for the source from which they emanate, but wholly and solely in proportion to the weight of evidence by which they are sustained. On any other basis all scientific discussion would be fruitless, and the time devoted to it worse than wasted.

The semilunar rectal valves, to the consideration of which this paper is limited, were first described by Mr. John Houston, of Dublin, in 1830. In a classical paper published in Volume V, page 130, of the Dublin Hospital Reports, he described these structures with a clearness and accuracy of detail which the passage of nearly three quarters of a century has only served to verify and emphasize. But, as has been the case in many other instances which might be cited, the verification of this description did not follow at once nor without a struggle. In fact, its correctness is even yet disputed by a limited few, whose opposition is chiefly notable for its dogmatic tone, and whose influence has done much to obscure and suppress the truth.

It would scarcely be pertinent to the purposes of this paper to enter into an exhaustive review of the literature of the rectal valve. But the matter is one of sufficient scientific interest to warrant a brief allusion to the more important views which have been entertained upon the subject.

At about the same time that Houston described the semilunar valves, the celebrated French surgeon, M. Nelaton, described what he designated the "third sphincter ani muscle," assigning to it a location

* Read before the Southern Kentucky Medical Association, Bowling Green, October 24, 1901.

corresponding with noteworthy exactness to that of one of Houston's valves. From this time on for many years the subject remained in a state of almost hopeless confusion. Velpeau (1837), Koherausch (1854), Gosselin (1854), Hyrtl (1857), Hener (1873), endorsed with varying qualifications and designations Nelaton's idea of a third sphincter. O'Beirne (1833) and Bushe (1837) confined their attentions to Houston's valves, the existence of which they fiercely disputed. Bodenhamer (1870) utterly discredited the presence of such structures as "veritable valves" in the normal rectum. Sappey (1874) denied the existence of either the semilunar valves or the third sphincter.

The first reliable corroborative evidence as to the correctness of Houston's views was furnished by two American investigators, Chadwick (1878) and Otis, of Boston (1887), and incidentally both record their convictions that no such structure as a third sphincter muscle is present in the normal rectum. The observations of both these gentlemen served to positively confirm the views originally expressed by Houston upon the anatomic point in question.

To Martin, of Cleveland, however, is due the present revival of interest in the subject in this country, and to him more than to any other investigator belongs credit for original work in this field. His first contribution upon the valves appeared in Mathews' Medical Quarterly for October, 1896, under the title, "New Evidence that the Rectal Valve is an Anatomical Fact," in which the subject was discussed in a notably fair and scientific spirit, and his methods of investigation fully set forth. Since that time he has written extensively upon the subject, and many other observers have added their testimony as to the correctness and accuracy of his work.

In order to bring the subject under consideration strictly up to date and be in possession of the testimony of reliable clinical observers, on March 4, 1901, I mailed a copy of the following questions to each of sixteen gentlemen whose authority on any subject of which they undertake to speak can not be gainsaid. The list embraced the entire membership of the American Proctologic Society, with the exceptions of myself and one other member, and in addition two distinguished specialists in gynecology and abdominal surgery:

1. When you have occasion to explore the movable rectum, do you invariably find the rectal valves present?
2. Do you regard them as definite anatomic structures?
3. What is your opinion as to their pathogenetic significance?

Fifteen of the sixteen responded. Of these fifteen, only one failed to declare himself in positive and unequivocal terms, he declining on the ground that he had not yet satisfied himself, and preferred not to go on record at that time. Omitting the third question as irrelevant to the present discussion, analysis of the remaining fourteen replies gives the following interesting results :

Question 1. "Do you invariably find the rectal valves present?" Twelve affirmative answers; one negative, qualified by the explanation that the writer frequently detected them, and only one straight negative.

Question 2. "Do you regard them as definite anatomic structures?" Twelve affirmative answers, one doubtful, and again but one negative.

It is worthy of remark that only one unqualified negative reply was made to each question, and that by the same writer in both instances. I very much regret that this gentleman did not see fit to mention the method of examination employed by him. In the absence of a specific statement to the contrary, we can only conclude that he has not yet familiarized himself with modern instruments and their proper use.

I take the liberty of quoting *verbatim* the pertinent portions of several of the replies. The originals of all have been preserved and are in my possession.

Dr. S. G. Gant, of New York, Professor of Rectal Surgery in the Post-Graduate Medical School, and author of a well-known text-book on the subject, says :

1. "Unless some disease destroying the elasticity of the rectum prevents inflation, I never fail to locate the valves."

2. "My experiments go to show that they are constant, are covered by mucous membrane, and have longitudinal and circular muscular fibers which extend well up to the edge of the projecting portion of the valve."

Dr. J. R. Pennington, Professor of Rectal Surgery in the Chicago Polyclinic, says :

1. "I have found the plicæ transversalis recti invariably present."
2. "It is my opinion, from numerous dissections made, that they are definite anatomic structures."

Dr. W. M. Beach, of Pittsburgh, Secretary of the American Proctologic Society :

1. "The routine proctoscopy which I practice invariably reveals the presence of two or more rectal valves."

2. "The rectal valve has the appearance of a definite anatomic structure, and microscopy supports that idea."

Dr. Howard A. Kelley, of Johns Hopkins, Baltimore, whose authority to speak on any subject connected with the anatomy of the pelvic viscera no man will question, expresses himself as follows:

1. "The semilunar valves I always find present unless destroyed by disease."

2. "Yes, I regard them as definite, important anatomic structures."

Dr. Richard Douglas, of Nashville, formerly Professor of Gynecology and Abdominal Surgery, Medical Department Vanderbilt University:

1. "I invariably find the rectal valves if the patient is placed in the knee-chest position and the proctoscope used. I never saw these valves until I employed the proper position for rectal examination."

2. "They are present in all patients that I have examined with or without rectal symptoms, and I therefore regard them as definite anatomic structures."

It is to be observed that the gentlemen above quoted each employs the proper posture and the proper instruments in his examinations of the rectal pouch. And it is well to define just here what is meant by proper posture and instruments. By the former is meant the knee-chest (not knee-elbow) position; by the latter, inflexible tubes, whether denominated proctoscopes or speculums, and the head-mirror. The principle involved in this method of examination is essential. Perhaps it were charitable to suppose that the few gentlemen who still doubt and deny the existence of the valves owe their attitudes on the subject to their failure to adopt it.

For the last two and a half years I have used the proctoscope constantly and habitually. During that time I have taken occasion to examine the movable rectum in some two hundred different individuals, and, with the exception of those subjects in whom the gut walls had been rendered non-inflatable by disease, I have not found an instance in which the presence of the valves admitted of a question. Let me put that stronger. I do no violence to the most exacting regard for truth when I say that I have not only invariably found these structures present, but always the most conspicuous and easily discernible features in the entire rectum. So uniform has been this experience that I should not hesitate to pronounce the rectum in which they were absent abnormal to that extent.

It matters little by what name they are called. The vital point is that they be recognized as facts, possessing the definite and constant characteristics of distinct anatomic structures. The only requisites

for the demonstration are a proctoscope, a head-mirror, and a subject. In my experience the nails are not more normal features of the fingers, nor the hairs of the head, than Houston's valves are of the human rectum.

I trust it will be fully understood that this paper has reference to the valves solely as anatomic structures. Their physiology and pathology constitute a most interesting study, but can not be entered into at this time. On a future occasion I shall hope to discuss these aspects of the subject with you.

Appended is a report upon the histologic structure of the rectal valves, for which I am indebted to the kindness of Dr. Louis Leroy, Professor of Histology in the Medical Department of Vanderbilt University. In the light of these findings, which do not differ from those of other experts, the conclusion is inevitable that these are normal anatomic structures, and, furthermore, that the term valves is more accurately descriptive of them than either folds or bands would be.

The specimen which forms the basis of the report is herewith presented. This is one of many dissections made by me, in all of which the findings with reference to the valves have been constant and uniform.

The Rectal Valves. The specimen was from a female, about twenty-five years of age, who had died from the rupture of an ectopic gestation. The rectum was ligated at its upper end, then filled with Orth's solution, and allowed to dilate as much as it would simply from the weight of the fixing fluid. A purse-string suture was then run around the anal end and drawn tightly so as to retain the fluid.

The whole mass was then dissected out and placed in a large jar containing Orth's solution, in which it was allowed to remain for twenty-four hours, after which it was removed, a slit cut in the end to allow the Orth's to escape, and the whole mass washed in running water for twelve hours and hardened in 50, 70, 85, and 95 per cent alcohol. A longitudinal incision was then made, exposing the entire interior of the lumen, and showing three rectal valves (valves of Houston). The following table shows condition seen upon inspection:

	First Valve.	Second Valve.	Third Valve.
Diameter of rectum at level of valve, . . .	6.1 c.m. (2.44 in.)	7.0 c.m. (2.8 in.)	5.2 c.m. (2.1 in.)
Height of apex of valve from periphery, . . .	1.7 c.m. (0.68 in.)	2.9 c.m. (1.16 in.)	1.5 c.m. (0.6 in.)
Proportion of circumference embraced by valve,	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{3}$
Distance from anus, . .	9.0 c.m. (3.6 in.)	12.5 c.m. (5.0 in.)	17.0 c.m. (6.8 in.)

The first valve was situated at 9 c.m. from the anus, and projected 1.7 c.m. into the lumen of the rectum. The rectum was 6.1 c.m. in diameter, and the valve embraced about one half of the circumference. The second valve was 3.5 c.m. higher up (12.5 c.m. from anus), and extended 2.9 c.m. into the lumen. The rectum was 7 c.m. in diameter, and the valve embraced two thirds of the circumference. The third valve was 4.5 c.m. higher than the second (17 c.m. from the anus), and extended 1.5 c.m. into the lumen. The rectum at this level was 5.2 c.m. in diameter, and the valve embraced one third of the circumference.

The relative position of the valves may be indicated by considering the patient to be in the knee-chest position, then imagining the circumference of the rectum to be divided into segments as the face of a watch. The figure 12 will be at the coccyx and 6 at the perineum. Lines drawn from 6 to 12 and from 9 to 3 will divide the lumen into quadrants.

The first valve would then be found to occupy that position of the circumference embraced between the figures 4 and 10 (through the spaces 4, 5, 6, 7, 8, 9, and 10). The second valve would begin at 9 and extend through the spaces 9, 10, 11, 12, 1, 2, 3, 4 to 5; overlapping the first valve, it will be seen at the 9 to 10 and 4 to 5 spaces.

The third valve began at 5 and extended through 5, 6, 7, 8 to 9, lying, it will be seen, entirely over the first valve, with most of its area in the left anterior quadrant (with reference to the patient).

A microscopic examination of all the valves shows them to be identical in structure and arrangement. The mucosa shows in general the usual structure of the large intestine and rectum. The simple tubular glands (crypts of Lieberkuhn) are arranged for the most part parallel to each other and vertical to the surface, but occasionally small areas are encountered in which they form somewhat of an angle. Upon the valves themselves the crypts are a trifle more numerous and closely packed together than in the other portions of the rectum. Many of the glands are full of mucus, and goblet cells are unusually numerous.

The mucosa progressively increases in thickness as it approaches the apex of the valve, where it is nearly half as thick again as it was at the base. In some of the valves a regular pyramidal mass is not formed, but two or three small secondary projections or ridges (giving the appearance of papillæ in vertical section) are formed, which, however, do not detract from the general outline of the structures. At the

under border of the mucosa masses of adenoid tissue are found, which vary in size from small collections of cells to large solitary follicles. These are much more numerous in the valves than in other portions of the rectum. Some of them start at the lower edge of the mucosa and extend down into the submucosa; others have their main bulk in the mucosa itself, the elements of which they barely displace. A few almost reach the surface. In the portion of the mucosa over the follicles the glands are usually particularly full of mucus, and in many instances glands are found which do not run vertical to the surface and parallel to their neighbors, but are seen to be cut squarely across, while the neighboring ones are in exact longitudinal section.

The muscularis mucosæ are very well marked, fully twice as thick as in the other portions of the intestine, and longitudinal and circular bands are prominent. A few somewhat obliquely running fibers may be distinguished in places.

The submucous coat is similar in structure to that found in other portions of the intestine, excepting that the fibers of yellow elastic tissue are somewhat more numerous than usual. This may possibly be accounted for by the fact that the valves are subjected to frequent disturbances in position, and tend again to resume their normal attitude.

In sections taken from the beginning of the valve at the point where it projected but very slightly into the lumen, the main bulk of the valve was composed of mucous and submucous tissue, the muscular coats not participating.

Throughout the area of the valve the submucous coat progressively increases in thickness until at the apex of the center of the valve it may form a large portion of the height of the structure and be three or more times as thick as in the other portions of the intestine. Near the junction of the mucous and the muscular coats occasionally a few smooth muscle fibers may be seen to leave the main bulk of the circular muscular coat and run up into the submucosa. Blood-vessels are extremely numerous, and vary in size from well-developed arterioles to capillaries. The muscular coat has also the usual intestinal arrangement, consisting of an inner circular and an outer longitudinal layer of smooth muscle.

As has been mentioned, at the very beginning of the valve the main bulk consists of submucosa and mucosa, but as we begin to approach the center of the valve, where it projects further into the lumen, we

begin to find the circular muscle fibers running in the valve between the two submucosa walls, as if the fibers had constricted and forced themselves into the transverse fold of the mucosa. The circular fibers in the valve are very greatly increased in amount, being sometimes four or five times as thick as in the non-valvular portions.

A contraction of the fibers would force the valve prominently into the lumen of the intestine, giving them what might be described as erectile qualities. Not, of course, in the sense in which the word is used in connection with erectile tissue, but only with reference to its action upon the valves as a whole.

The longitudinal layer varies in its course in different portions of the valve. Near the beginning it simply spans the base of the valve and lies in contact with the circular fibers. As the valve increases somewhat in height it may be seen to span the base, but a varying amount of areola tissue will be seen between the circular and longitudinal coats. As the valve still increases in height a portion of the longitudinal fibers may follow the circular fibers into the base of the valve and the rest span the base. Again, in some places the entire longitudinal layer follows the circular layer into the base of the valve. External to the muscular coat is a layer of the peri-rectal fascia, which consists of rather loose connective white fibrous and yellow elastic tissue. A considerable interspersation of adipose tissue is also found. The vascular supply is very rich, and small nerve fibers and ganglion cells are quite numerous.

From the foregoing it is clear that the rectal valves are not composed of mucosa alone, but comprise in their structure submucosa and muscular fibers as well, and therefore must impose direct resistance and support to the rectal contents, hence must be regarded as something other and more than mere folds of mucous membrane. From the modification in structure and arrangement which all the coats present upon reaching these valves, we are forced to the conclusion that they are definite anatomic structures, and should be entitled to recognition as such, just as much so as the appendix vermiformis.

NASHVILLE, TENN.

TYPHO-MALARIAL FEVER.*

BY WILLIAM AVORY HOWARD, M. D.

What is typho-malarial fever, and is there a common etiological factor in this and all other adynamic diseases? Why do we hear among the older physicians (and many, I feel sure, are much better acquainted with fevers than the younger men of our profession) the use of such terms in diseases adynamic in character as typhoid-pneumonia, etc.? True each has the low muttering delirium, carphologia, subsultus tendinum, and, in fact, every evidence of an overpowered nervous system.

Now, the writer has given this question a close study for years, and offers his deductions as a theory for further investigation. What is the etiological factor or entity causing this low muttering delirium, carphologia, subsultus tendinum, etc., so familiar to every clinician? This, I consider, is to-day the most pressing inquiry that we as bedside observers and clinicians are called upon to analyze, dissect, and probe to the Why? Will we? When this is done we will hear no more of mountain fever, typho-malaria, and continued fevers. I am thoroughly convinced that not only the names, in the past and present so misleading, but the hydra-headed diseases of all those unclassified, double-named, etiologically are one disease, and when the cause of all is well known their names will pass from the nomenclature of medicine.

You know that we as men are often lazy (our clients see it, too). Again, in the monotonous character of our work we lose the acute scientific interest that each disease demands at our hands, and go trotting through our daily duties in a purely mechanical way. This portrays most of us, and how we act after we enter the sick-room and the daily greetings have passed: Take a seat at the sick man's bedside, look at his tongue (one in four of us could not tell what its coating indicated), take temperature, count pulse, ask a few questions for formality's sake—usually of sleep and temperature—write a prescription, wipe the thermometer on a dirty sheet or a still dirtier pocket handkerchief, leave directions as to what the abused invalid should eat, tell the expected time of our return, put on a face with "linked sadness long drawn out," and depart. The last state of that patient is worse than the first. Not one thought or act have we done, chemically or

* Read before the Central Texas Medical Society, July, 1900.

otherwise, to find the wherefore of his continued illness, though that dirty thermometer may keep us busy, especially in diseases of a contagious nature. I am sorry this is true in the history of many good men.

There is a physician in my town who was called upon to treat a boy who had stuck a pine splinter in his hand, a part of it being exposed. This he drew out, deeming it unnecessary to see if any part was left. The hand became much swollen and the boy had fever; blood poison set in of a low, typhoid type, growing from bad to worse, until nature, by the process of sloughing, threw off the offending splinter, and the boy, in spite of the surgeon, got well. Now, this is a case almost paralleled in all those anomalous fevers we so often read of "from Greenland's icy mountain to India's coral strands."

I wish all of us could see the farce of our acts and feel the lack of individual investigation, of which no one of us can say, "My conscience is clear."

"There was a door to which I found no key;
There was a veil through which I might not see;
Some little talk, a while of Me and Thee
There was, and then, no more of Thee and Me!"

The "Me and Thee" are all careless, often tired and exhausted from loss of sleep, mental worry being the leading factor.

In 1891 the writer was a three weeks' victim to continued malarial fever, and observed the slouchily-performed work from the other side of the veil—the physician's. I being a doctor, all considered me an unworthy prey, and in the services rendered they were no worse than I had been.

Well, our patients rarely die, thanks to nature's recuperative powers!

Now, believe not I claim to "know" any thing positive in medicine; I have practiced medicine too long. It was different twenty years ago, but I offer these personal deductions as an incentive to further investigation by more competent clinicians. For some years I have hesitated in prescribing for a client unless I saw some pathological condition demanding the physiological action, as far as I knew, therapeutically of the remedy I prescribed, to assist nature in removing the disease. Here I found urinalysis, as well as tests of other excretions, also the secretions, to afford no little value. The routine of prescribing for our patients will pass when we do our duty cautiously,

investigate and weigh carefully the relations of symptoms and pathological lesions. Medicine is a science! The opinions and statements of the family must be taken *cum grano salis* unless confirmed by personal investigation by the You.

It is amusing to read the dicta of the great men of our profession—and rightly are they great for the noble work they have done for us—about the tongue and its appearance as a guide to diagnosis. The expressions of our standard books and the dicta of our greatest men are only thoughts of men, not all great, however. There never was a doctor who became proficient in our profession that adhered closely to the “books.” He became a physician because he “thought.” He reasoned independently of books. Books are only made to cause men to think, and, in a measure, direct their thoughts. His own guide should be his deductions from personal investigations, acting only after careful, cautious, rapid, deep reasoning. Through this ordeal and only by his individual development does a doctor also become a “physician.” This being true, no doctor can place himself in your chair, with this special patient at his or her age, with his particular sanitary surroundings and social environments, and tell you, you now at his bedside, what his tongue says, his color teaches, his eyes to you tell, his bowels, liver, and kidneys secrete or excrete.

The men of books speak not clairvoyantly to you, but you must call to your aid the highest faculties with which nature, finite nature, should have endowed you—your reason—the one point at which our nature touches the absolute. Here the Great I Am is alone responsible, and I use the capitals not sacrilegiously. Your decision, from your responsible professional position, places you “arbiter” to that client. Can you afford to destroy time, often precious time to the sick man, conning your memory as to what Flint or Bryant said? He who would be greatest among us must learn to think quickly and rightly, readily making his deductions as to what should be done, and hesitate not in the doing! Facility of action, in emergency, establishes a doctor.

To the writer the tongue in disease means much; not like the poet said:

“The flattering tongue in falsehood deals,
And tells a tale it never feels!”

But the eyes tell us, sometimes, much more; the skin and the muscular system—in fact, all parts of the sufferer, questioned closely, will objectively speak to you at a glance. This is of equal value to know-

ing the temperature. The pulse, of all the external or objective(?) symptoms, is of most importance. All these features (factors), if you will be true to yourself and to your profession, will give you the desired information. But there is not a man on earth that can make these things or parts, except, unfortunately, the tongue, too often, speak to you. Mentally honest, determined to know their language, you will be surprised at the knowledge they silently, gladly convey. In time you will, while walking on the street casually watching the passing crowd, wonder what a great preserver nature must be, as finely-dressed ladies and gentlemen pass you, whose saffron-colored eyes and skin show that their vital powers can exert their functions; when you realize, too, that at each pulsation of their hearts the blood that should be pure—a life-giver and sustainer—is filled with poisonous fecal ptomaines, so full, indeed, that often breath and perspiration give off an offensive odor.

This being true in the seemingly healthy man, can we wonder that typhoid conditions appear when his system is invaded by some concurrent disease. If our "city fathers" allowed the sewers of the city to become as befouled and clogged as most persons do their bowels, the great sewer of their system, what a cry from these same individuals would be heard! Would not that city be an inviter of all types and kinds of plagues? The old professor was partly right when he said: "I know I will not die to-day if my bowels move well in the morning." Yet this "well" is often a week late; the freight, being side-tracked, is delayed. A good motto for the people *en masse* to adopt would be: "Keep the bowels open and breathe deep, then money spent in doctors' bills they could keep." No man can have a clear face and an open, clear countenance, nor clear conscience, for that matter, whose bowels are constipated. He must be sensible of having sinned against nature; and be sure he shall pay the penalty.

The bile is nature's potent germ inhibitor and destroyer in our alimentary canal. As long as this canal, the sewer, is kept flush and drained, the bile inhibits the growth of septic forms of bacteria through its entire length; but constipation gives not only a nidus in which septic forms can develop, but those otherwise harmless develop septic characteristics and fill the blood with their poisonous ptomaines. The liver is nature's sentinel, guarding the general circulation from infection that would otherwise enter through the alimentary canal, but when it is overpowered in the futile attempt to prevent auto-intoxication, the bile, losing its normal alkaline reaction, becomes acid, ceases

to be an antiseptic, and becomes a hotbed for all disease-producing micro-organisms. Overwork paralyzes the liver, the blood becomes filled with ptomaines; it then falls to the kidneys to do, vicariously, the work normally performed by the liver. The result is the liver becomes inflamed and clogged; the blood, losing partially its alkalinity, becomes an irritant; the result is the parenchyma of the liver, kidneys, and, in fact, the intima of all the blood-vessels and delicate organs become subacutely inflamed, leading finally to a general fibrosis—old age.

I make this statement without fear of contradiction: No man ever died of chronic Bright's disease who has never suffered from constipation. This fact does not include cases of acute beginnings, from scarlet fever, malarial poisons, etc.; furthermore, I do not believe scarlet fever would have nephritis as its sequel once in a thousand cases if the bowels were kept open by mild alkaline salines, and high enemata of warm salt solution were daily given during the febrile state. These are the only remedies I have seen indicated in scarlet fever. Enough digression. If this ptomainic infection, in seemingly good health, leads to such far-reaching, insidious, and, if the warnings go unheeded, irreparable disease-destruction of vital organs, how natural it would be in acute forms of disease for this poison to cause a low type of fever, typhoid in character, not of typhoid confection, but from the lack of power in the ptomaine-poisoned blood and organs to throw off the new invaders.

Again, is there not a question of the colon bacillus becoming virulent under such favoring conditions as are here presented? Does it ever become a bacillus typhosus? I ask anxiously for information. For those of us less fortunately situated than our scientific brothers in large cities I plead. Having investigated under all its phases the so-called typho-malarial fevers in this section, I unhesitatingly assert that the typhoid element, with its long-drawn-out fever, is nothing more nor less than the ptomaine poison added to that of malaria. Treated from this hypothetical(?) basis, it can be cured in as many days as it formerly consumed weeks treated symptomatically; treated specifically for malaria and the elimination of septic germs from the alimentary canal, thus preventing further auto-intoxication, we can not have that low type so closely resembling typhoid fever. Adopting this course of treatment, I have proven its value without a single failure for the last five years in this malarial district.

The treatment adopted is a free calomel purge, followed in the morning by an alkaline saline, a daily or twice daily flushing of the large bowel by high enemas of salt solution—hot if fever is not lower than 102° , cool if above 103° .

The saline laxative I prefer (but not the patient) is a saturated solution of hypo-sulphite of soda. One to two tablespoonsful of this solution is given the first morning after the calomel, and continued morning and evening in small doses for two or three days. Give quinine at bedtime in twenty-grain doses, and early in the morning, about 4 o'clock, if possible; the twenty grains of quinine I repeat the next night and morning. Given thus at bedtime, when every thing is still, the patient falls into a quiet and undisturbed sleep, and remains so during the night. This manner of giving quinine, with same size doses, is repeated on the second day. On the third morning all symptoms of malaria, and usually the ptomaine poisonings also, have vanished, and the patient makes a rapid recovery.

Now, do not make a mistake and give the compressed calomel tablets usually found in the drug-store. They were calomel when first triturated and compressed into that form; what they are now it would take an analytical chemist to say.

Typhoid fever is not a prevalent disease in Waco, Texas, so have met no case of it during this period. Will some one try the cure of typhoid fever on this course of treatment? Dr. Waugh's success in treating typhoid fever depends on the laxative and antiseptic powers of his tablets, if I comprehend the physiological action of their ingredients.

Let us unfold the tangled pathology of those doubly-named hydra-headed diseases that disgrace the medical profession! You who have greater facilities from your location in large cities for pathological investigation and access to chemical and microscopical laboratories, lend us your assistance.

WACO, TEXAS.

Reports of Societies.

THE LOUISVILLE CLINICAL SOCIETY.*

Stated Meeting, October 22, 1901, the President, Ewing Marshall, M. D., in the Chair.

Multiple Sebaceous Tumors of the Scalp. Dr. Ewing Marshall: This gentleman, Mr. S., age forty-three years, was operated upon by me a week ago last Friday; I removed six sebaceous tumors from his scalp. I brought with me two of the tumors, not because of their rarity but because of their size; you will notice they are fully as large as hen eggs. I have never seen any as large as this before in the scalp.

There were six of these growths, and he thinks they date back at least twenty years, and they made a very ugly appearance before he was operated upon. With the larger tumors considerable portions of the scalp were taken away, and while the remaining scars are not perfectly smooth at present, I believe they will become so later.

The points of interest in the case are, first, the duration of these growths; second, the number, and third, the large size of several of them.

Chloroform was given as the anesthetic, and just as I was removing the sixth growth the patient's face became purple, his respiration was bad, and I was considerably worried about his condition. Believing that it would be a great calamity to lose a patient under such a simple operation, I hurried too much over removal of the sixth tumor, causing me to overlook a twin tumor, and that is the principal reason I asked the patient to come before you. I took one growth out at the right side of the back of the neck, just above the hair line, and when I came to dress his head afterward I found that a twin tumor had been left behind.

In thinking over the matter, the subject of the anesthetic came up. I have seen it suggested somewhere to have a veil or cover between the patient's head and the operator; of course this would not be feasible where you are operating upon the head, as in this case, but in any other part of the body it would relieve you of any anxiety about the patient, or the person giving the anesthetic being annoyed by the operator. Dr. Griffiths assisted me in the operation upon this patient.

Cyst of the Epiglottis. Dr. M. F. Coomes: The following case is reported simply on account of its rarity. Ten weeks ago I was asked to

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

see a colored woman who had a cyst occupying the front of the epiglottis ; the growth covered the entire front of the epiglottis, with the exception perhaps of a line in width on one side. The tumor was fully the size of a large plum, and was perfectly cystic. It looked exactly like a "fish bladder." This growth caused no inconvenience by its presence, and the patient did not appear to know any thing about it.

Cysts of the larynx do occur occasionally, but I have searched the literature and can find no mention of the report of a case of cyst in this exact location. The woman promised to come back and allow me to remove the growth, but she failed to do so.

Discussion. Dr. S. G. Dabney : I had a case in many respects very similar to the one reported by Dr. Coomes, about two years ago. The patient was a lady, aged fifty-five years. She was in bad health in other respects ; in fact, a chronic invalid. I was asked to see this patient by a general practitioner, for some trouble about her throat. She, however, had much more decided subjective symptoms than the case reported, probably because of the location of the growth. It grew apparently from about the junction of the epiglottis, with the fold that runs around toward the arytenoid. When I saw her the pyriform sinus was occupied by a perfectly clear, transparent mass of considerable size. It adapted itself to the shape of the cavity in which it was contained, so that it would be easily compressed, and under certain conditions it would lap over on the windpipe and slightly obstruct respiration, and this was what she complained of. She had no pain ; enlargement of the growth had been gradual, and it had existed for several years. I was anxious to remove the growth *en masse* and examine it, but as soon as my instrument (snare) tightened around it, the tumor collapsed. It had perfectly fluid contents.

I did not examine the literature of the subject at the time, but this is the only cyst in that location that I have seen.

Depressed Fracture of the Skull. Dr. Irvin Abell : A negro was brought into the city hospital last Saturday night with a depressed fracture of the left temporal fossa ; this depression was one inch long and three quarters of an inch wide. Upon removing the depressed bone it was found there was a slight laceration of the dura, and a little blood issuing from it. Opening the dura at that point, it was discovered that laceration of a small vein in the fissure of Sylvius was causing the hemorrhage.

The only symptom the man presented because of the fracture was that of loss of speech. It is now over forty-two hours since the operation, and

his general condition is perfect, but he is only able to utter a few monosyllables. His mental condition is clear, and he can write answers to any questions asked him. The only other symptom is a slight paralysis of the muscles of the tongue of the left side.

The slight hemorrhage and consequent pressure should not cause such symptoms as these. I take it his symptoms are due to injury of the center at that point.

I would like to ask the opinion of the members as to the probable ultimate outcome of the case; in the event he recovers, what will be his condition of speech?

Discussion. Dr. C. Weidner: The case is interesting, from the fact that it beautifully illustrates the accepted view of the physiology of the parts concerned in this injury.

As to the probable outcome, I do not know that I can give an opinion; I suppose the doctor will have to wait. There is possibly a certain amount of congestion, or a condition of edema has taken place, and there may be improvement in a short time. Frequently the acute symptoms are much worse than later on, for the reason that we have an acute hyperemia, and possibly an edema, which may wear off after a certain amount of time has elapsed.

Dr. J. W. Irwin: The case is interesting because it shows the physiology of what has been long recognized. The injury seemed to have occurred above the center of speech; I believe the center of speech is three fourths of an inch lower down, situated, of course, in part of the anterior portion of the brain. It is possible that there is in this case nothing but what might be called a relative lesion. Any shock in that neighborhood might have paralyzed that part of the brain. Shock or a blow at or near the center of speech might cause a certain amount of loss of speech. If that is the case, he will entirely regain his speech, and I believe this will occur.

Dr. M. F. Coomes: An interesting condition is the paralysis of the tongue. I have seen but two cases of motor paralysis of the tongue. The paralysis in this case proves conclusively that the man received other injuries aside from fracture of the skull. If you will recall your anatomy you will find that the tongue is supplied by a special nerve of motion, and that nerve does not perform any function save to furnish the tongue with motion.

During the past summer a little girl was brought to my office by her

mother, who said that the girl could not speak very plainly, and that in sticking out her tongue it would go to one side. After looking over the case carefully I insisted that the child had been injured. The mother said this was not true, but the next day she came back to tell me that a few days before the little girl had turned her head around to one side suddenly, and it had remained in that position for a long time, and that a doctor had to be called to get it back, etc.

The second case was in the person of an elderly man. He had motor paralysis of the tongue, but was otherwise perfectly well. The only cause for the trouble that could be discovered was that the man had been to a dentist; he said the dentist took an impression of his mouth and nearly broke his neck. I am sure that the dentist was the causative factor in this case; that he stretched the motor nerve while the patient was in his chair, and that the injury was produced in this way.

In the case reported by Dr. Abell the patient must have had his neck twisted at the time of the injury to the skull. I believe the man will regain his speech. (This man made complete recovery, regaining his speech.)

Dr. Ewing Marshall: I have seen a number of head injuries where speech has been lost, and must disagree with Doctors Irwin and Coomes about its being so certain that perfect recovery will take place. On the other hand, I have seen cases where after removal of spiculæ of bone from the brain in this region, when the patients recovered from the effects of the anesthetic, the power of speech would be restored.

The first experience of this kind I had was a case in which I was associated with Dr. Roberts. A man had fallen from a railroad bridge and struck some rocks. I saw him at the end of thirty-six hours after the accident, and Dr. Roberts was called in consultation. He cut down over the injury and removed a spicula of bone—a long thin sliver of bone almost like a knife-blade—which had been jammed down into the brain, and supposed that was all of it. When the man came from under the influence of the anesthetic he could speak; the first word he had spoken since receipt of the injury. That patient did well for a year or more, when secondary troubles developed and he died from abscess of the brain.

In injuries to the brain, where there is any destruction of brain tissue, we can not always give a favorable prognosis.

Dr. Irvin Abell: The paralysis of the tongue, in this case, being on the same side as the injury, is a little peculiar. It seemed to me that the injury was very near the speech center, over the inferior frontal convolution.

The essay of the evening, on "Emotional Insanity," etc., was read by Ewing Marshall, M. D. [See page 441.]

Discussion. Dr. Carl Weidner: I agree with the essayist in every respect as to the management of these cases. He is right in saying they ought to be taken charge of in the proper way in an institution, either temporarily or permanently. The expression homicidal or suicidal tendency usually makes a most marked impression upon an average jury, while the physician will see many other aspects of the case to make him believe the patient ought to be confined to an institution.

As to the sexual forms of insanity: I have seen quite a number of these cases, and some of them undoubtedly make beautiful recoveries. I recall two such instances, one in a young man, the other in a young girl. The young man represented a typical case of this form of insanity; one of the prominent symptoms being Onanism. He masturbated for a number of years. He was sent to an asylum, and was discharged after a year's time as cured. He was mentally perfectly bright, had a good education, and showed by an ordinary examination no defective condition of the mind.

I knew a young lady, a sister of this young man, who I think had some sexual derangement. She was well developed physically, had had some uterine trouble, was ready to try all kinds of patent medicines, etc. She developed a peculiar form of melancholia, and at the same time she was ready to attack her parents or any of her friends. She soon developed all the symptoms such as we see in mania. Sitting in her room one day she smeared the contents of the chamber and an inkstand over herself. I advised her parents that she be sent to an institution where she could be properly cared for. Not more than five days later she got married, and from all reports I have been able to obtain since, she has been cured. There was a neurasthenic history in these cases, particularly on the mother's side.

I believe all cases of this kind ought to be sent promptly to an institution, particularly, as Dr. Marshall has stated, when they present these two factors, when they are ready to attack someone else, or commit suicide. Still we frequently have trouble in bringing these cases before a jury to prove that they are insane, the term insanity has such a wide range.

The causation of these troubles we know very little about. I am astonished to hear that alcoholism seems accountable for such a large percentage of cases; on the other hand, that such a small percentage

seems to be due to organic diseases, such as syphilis, etc. Lead, mercury, phosphorus, arsenic, and other drugs may play a part in the production of insanity.

Dr. F. W. Samuel : This is a subject I know little about, and do not rise to speak to the paper, other than to indorse every thing that the essayist has stated. I believe that our laws are too lax. It is only lately that our States have taken up such matters—not only in regard to such cases as are under discussion to-night, but criminal cases as well. We ought to lend our aid to make such laws in this State. If doctors would do more in regard to legislation, we would have laws whereby such cases as these would be put away from society. They lend a bad example to the lower classes.

* Dr. W. H. Wathen : This is such a broad question that it is difficult to know just where to begin, or what to consider in discussing it. The question of deciding between insanity and sanity in many cases is so difficult that it is impossible, even with experts, to convince a jury that a person is or is not insane. This is a difficulty that we will always have to contend against. Of course, whenever a person is positively insane, he should be confined, so that he can neither inflict injury upon himself nor upon others. There are so many acts of violence committed where we are unable to decide if the person was influenced from an insane condition, or from a moral mental obliquity, that we will have this trouble to contend with. I believe there are many persons who commit acts of violence upon themselves or upon others in an apparently emotional condition of insanity, who would never have done so had they been properly trained when young ; but they are neglected, false ideas are permitted to be cultivated, hence their condition.

As to the question of insanity in its relation to sexual matters : It is difficult to decide as to whether in all instances it is a truly insane condition, or an excessive development of desire. In some instances where the condition is very marked, we immediately decide in favor of insanity. I have known of quite a number of cases in my practice of women who were not considered insane, and were not so, as far as any one could discover, who have told me that it was absolutely essential to their existence that they have sexual intercourse.

As to the treatment of these cases of insanity in relation to sexual matters, where there is supposed to be some irritation in some part of the sexual apparatus, it is difficult to decide upon what to do. I do not believe we ought to operate upon any person for the removal of any part

of the sexual apparatus for the purpose, *per se*, of curing insanity. But these cases should be operated upon, just as we would if they were sane, for the reason that if they have disease which is injurious to their health, or dangerous to life, it should, if possible, be removed by surgical intervention. And we can cure some of these cases by a surgical operation, because the disease itself may have caused the insanity. But the removal of a clitoris or the removal of an ovary for the purpose of curing insanity or of destroying excessive venereal desire, unless these structures be positively diseased, I claim is unjustifiable and should not be done. I expect to remove within the next week a large ovarian tumor from a woman who is at the Lakeland Asylum, whose husband was in to see me yesterday, but not for the purpose of causing her to become sane, but for the purpose of removing the tumor that should be removed if she were entirely sane, and there is no reason to believe that the operation will make her sane, because I do not think her insanity was caused by the tumor.

Dr. M. F. Coomes : There is no subject connected with the whole domain of medicine which is more interesting to me than insanity. There is nothing so horrible as to see a human being dethroned of reason. The subject is too broad to attempt to discuss it in a general way, and I wish only to call attention to one or two points in connection with insanity.

It is a fact that preceding the time of liberation of slaves in this country there were very few negroes in the insane asylums. Now you will find the insane asylums filled with negroes, which proves to my mind that the mental strain and worry imposed upon these people by their having to think and care for themselves has been the cause of their insanity ; while in slavery they were unused to worry or responsibility, and when thrown upon their own resources, in many instances, their minds have become unbalanced.

Another point occurs to me in this connection, viz : the better education of the general public in regard to insanity. Within the last year I have had two cases under my observation which illustrate this positively ; both were cases of melancholia, and both occurred in men. The first man became a patient of mine for mastoid disease. Preceding that time he had melancholic spells, and was brought to my office shortly after this with a very decided attack of melancholia, believing that some one was going to kill his little sister. It is this class of cases that become absolutely dangerous. These people go on, and if they do not succeed in reaching a climax in some way, they finally get to that point that they either kill somebody, or if they fail in this, they commit suicide.

The second case was an interesting one, in which a man had been kept in a sanitarium for several weeks. He had been sent there for the reason that he believed some one at his home was going to kill him. Some of his people went to the sanitarium to bring him home, believing that if he could see his supposed enemies, and be convinced that they would not hurt him, it would set him right again. Between the sanitarium and railway station he borrowed a penknife from his brother, ostensibly to clean his finger-nails, and immediately attempted to commit suicide.

People should be made to understand in a general way that these are the most dangerous of all lunatics ; they are much more dangerous than the violent class.

Dr. T. P. Satterwhite : There is, in my opinion, a cause for every ailment that humanity is heir to ; the difficulty is to ferret out that cause. Reflex agencies, as we all know, will sometimes produce insanity, and the removal of the seat of that irritation is the proper treatment. We also know that toxins will, under certain conditions, produce insanity. Dr. Coomes made a very pertinent statement about insanity in the negro race. While the negroes were under slavery they were fed upon plain, nutritious food, but since their liberation their food is of an entirely different character. But of course all these things depend upon the stability of the nervous system ; the reserve force, we might say, of the nervous system. If a man has sufficient of this reserve force, it can be called upon ; it may last for months or even years, but there is a limit to it. It is finally bound to succumb, and when this happens it may manifest itself in many forms of mental disease.

I am clearly of the opinion that all insane people should be examined thoroughly as to their physical condition, for all defects, and if there is disease in any part of the body, it should be relieved.

I do not pretend to say that we can always cure these patients ; but certainly the literature of the subject will bear out the statement that if existing diseases be relieved, in many cases the insanity will be cured.

I believe there should be connected with every institution where the insane are confined specialists in the different departments of medicine and surgery to thoroughly examine every patient and institute such treatment as may be necessary for their physical relief.

Dr. Geo. B. Young : I have had some experience in insanity, having served for a year in an asylum where we had eighteen hundred inmates, consequently I saw many cases such as described in the paper. However, I disclaim any pretension as an expert alienist.

I think in the majority of instances where the condition described in the paper is present, there is really only one symptom to be considered, and that is an impaired mind ; the sexual manifestation is the result of an impaired mind. It is true there are some cases where apparently there is a reflex trouble connected with the sexual apparatus, especially in women—purely a sexual neurosis. Unquestionably, however, in the majority of cases there is a general neurosis, the sexual manifestation being due to this general condition.

As to the question of prevention, I believe Dr. Marshall is entirely correct that it is a matter of training during infancy and childhood. If any physician has under his care a family where there is a distinctly nervous history, he should impress upon the parents the importance of not humoring their children.

As to the question of prognosis : In the simple sexual neurosis I think the prognosis is fairly good. The case reported by Dr. Weidner shows that. I have personal knowledge of a similar case, a young girl, occupying a high social position, who received a great deal of attention from the opposite sex. She developed a most violent sexual appetite. On one occasion she went up in the middle of the State, perhaps a hundred miles from where she lived ; she occupied a drawing-room in the sleeper, and in traveling that hundred miles she had intercourse with seven different men. Finally she gave birth to an illegitimate child, and the whole thing became known. She was sent away from home and apparently entirely recovered. This happened about ten years ago. She has recently been married, and has been entirely restored to her former position in the social world.

We can not promise a cure in cases of this kind, as the proneness to recurrence in emotional insanity is so marked. I have seen over and over again cases of women who would be sent to the asylum, and at the end of six or eight weeks they would be apparently restored to perfect reason. They would be sent home perfectly sane. In three to five months they would return to the institution in the same condition as before. In some instances there have been as many as fifteen recurrences.

This brings us to the question of treatment : There is no question in my mind that every person who shows an insane impulse should be placed under proper restraint ; by this I mean in an institution where proper treatment and restraint can be applied. Every person in this condition is a source of danger to the community, no matter what the

form of insanity. Violent maniacs are not as dangerous as melancholiacs ; the public, of course, recognizes the dangers incident to violent insanity, while the mild melancholiac, who is vastly more dangerous, is often allowed liberty.

All the things mentioned by Dr. Satterwhite may best be accomplished in a properly equipped asylum. If you cut off a spur from the turbinates, if you relieve a stricture of the rectum, cut off an enlarged clitoris, or any other operation upon an insane person, it ought to be done in an asylum where the patient may be kept under constant surveillance.

When persons believed to be insane are brought before a jury they look for some frank act of violence, and in the absence of this they usually decide that the person is sane, although for many reasons medical men may be certain that the converse is true. The history of a family neurosis, etc., has no effect upon the average jury, who only look to the personal acts of the person himself.

Dr. J. W. Irwin : I was greatly entertained by the paper ; the essayist has taken a very wide range, a range I fear we will not be able to discuss with any degree of satisfaction. In fact, we could not do justice to the writer of the essay unless we alluded to the views expressed in his paper.

Dr. Young has covered all the practical facts as far as the asylum goes. The experience of all physicians who have had some association with the insane, is to the same effect as Dr. Young has stated. His statements might be considered classical, as far as our best knowledge of insanity is concerned. If we are to classify the various disorders of the brain coming under the head of insanity as emotional or impulsive insanity, such as Dr. Marshall has made the title of his paper, then the range should have been limited. However, those are the most dangerous forms of insanity we meet with, because such persons are so hard to be proven insane. For instance, an emotionally insane person may be an inveterate liar ; he would rather lie than to tell the truth ; he does not seem to become conscious that he is telling a lie ; he does not seem to think that it is immoral to lie. Again, excessive sexual desire sometimes springs up during the early stages of those disorders ; usually, later, all sexual desire is lost. But in the vast majority of cases of emotional insanity, increased sexual desire is one of the first symptoms noticed. Such patients will sing, pray, swear, and at the same time they will be ready to stick a knife in you if they get a chance. They must always be watched.

The causes of insanity, as a matter of fact, might be summed up briefly : Traumatism is sometimes a cause, injuries to the brain, etc., but toxins seem to have a wider range, and the later views of what is believed to be the pathology of insanity bear out this idea. Haig, in his work on uric acid, has thrown out many new hints touching the question of insanity. He has shown that capillary engorgement conduces to suicide and precedes various forms of insanity, and one can easily understand his views. He has also shown that persons who use large quantities of red meats and of alcoholic substances, such as beer, ale, etc., are far more liable to insanity than those who live on vegetables, fish, and milk. Hence the uric acid theory seems to be the prevailing one at present, and it is constantly gaining ground in medical literature. Toxins or morbid products are retained in the brain, due to the effect of obstructed capillaries, decreasing the action of the heart. We know that circulatory disorders conduce to insanity, and this has been noticed especially in Graves' disease. A certain per cent of those cases end their lives in insane asylums.

Touching the question of alcohol in relation to insanity : Morel has stated that alcohol is a potent cause of insanity. He has collected statistics touching the question of heredity. He has shown that in all his collection of cases of insanity, numbering many thousands, from sixty to seventy per cent have a neurotic history ; that the other thirty or forty per cent are due to alcohol, syphilis, traumatism, and to various other causes, such, for instance, as the puerperal state, diet, adolescent neurasthenia, hysteria, and those disorders that conduce to a lower state of vitality. He has found that the first generation of drunkards conduces to drunkenness and immorality ; the second conduces to greater drunkenness and to impulsive (insane) ideas ; the third conduces to melancholia, hypochondriasis and greater impulsive ideas, even to murder ; and the fourth conduces to idiocy, imbecility, and to extinction of the family.

The statistics of one family (the father and mother being of the third generation of drunkards) of sixteen children show that fifteen died in infancy, the sixteenth lived and developed epilepsy later in life. This is but a single instance in which an entire family was destroyed apparently by alcohol, yet there are plenty of other data to show that alcohol has in great measure conduced to insanity.

Dr. Coomes has mentioned an important point, that among the negro slaves there was no such thing as insanity before they were set free.

Statistics go to show that no such thing as insanity was known among uncivilized races of men. Civilization has conduced to insanity. It is a fact that females live longer than males, and this may be the reason why the female sex is supposed to conduce to more insanity.

In considering the whole question, the most important point is the treatment. If recent ideas as to the pathology of insanity may be accepted, the presence of toxins in the blood, the wrong sort of nutrition going to the psychological centers, is the chief cause. If uric acid by increasing capillary obstruction is a cause of insanity; if those predisposed to gout and rheumatism, etc., are more prone to insanity than others, then the views brought out by Haig and several German observers must be the correct ones, and we have taken a step in advance in determining the treatment.

We know that auto-intoxications conduce to insanity; in the puerperal state in a certain number of cases. If meat-eaters have more insanity among them than others, as statistics go to show; if gluttons are prone to insanity, as also seems to be true, then it would seem important to change the diet of these patients, give them vegetables, milk, and fish, keep them in the open air, give them healthful sanitary surroundings, and clothe them properly.

Dr. Ewing Marshall: Referring to the remarks of Dr. Weidner: The law looks only to the individual acts, while the medical side of it is looking at the past history, etc.; or, as I have put it, the law says an insane act, while medicine says insane acting.

In regard to statements made by Dr. Coomes: There is another reason for insanity at the present time among negroes which did not obtain while they were in slavery, viz., that they drink much more whisky now than they did in slave times. In addition to that, we all know they are addicted to all kinds of drugs. They are not only drunkards, but are likewise great drug habitues.

I agree with Dr. Young that these troubles are more often due to a general rather than a special neurosis. There is more than likely a lesion either in the brain or spinal cord.

P. F. BARBOUR, M. D.,
Secretary.

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SANITARY CONDITION OF HAVANA, CUBA.

There was not a single case of yellow fever in the city of Havana during the month of November, 1901, a condition that has not prevailed in that city for more than two centuries until the present year. This immunity is due solely to the preventive measures employed, thus demonstrating the possibility of combating successfully one of the most fatal diseases to which human flesh is heir.

To say nothing of the great importance of saving human life, the commercial importance of this event can scarcely be estimated, as the island of Cuba is one of the most fertile in the world, and with absence of yellow fever would be one of the most salubrious spots on the face of the globe. Nothing in the history of the island is so much calculated to benefit it as the fact of letting the world know that it can be maintained free from the ravages of yellow fever. This fact will induce immigration for the purpose of permanent habitation as well as for commercial investment. The demonstration of the fact that the health department is able to control or prevent yellow fever is a guarantee that has long been wished for by those who desire to visit this island, as well as those who want to make it their permanent homes. Lastly, but not least, it demonstrates the importance of having

the right man in the right place, for there are few men who would have been able to accomplish what Governor Wood has accomplished, because without a thorough knowledge of practical medicine many barriers would have presented themselves that would have been difficult to surmount. The victory achieved in eradicating yellow fever from Havana is one of far more importance than any victory in modern warfare. It means much more to the human race, and brings security that can only be obtained by careful scientific investigation into cause and effect.

BEECHHURST SANITARIUM.

This valuable institution has passed into the hands of Drs. Ernest and G. R. Rau since the death of Dr. Stone, and it could not have been placed in better care. The Drs. Rau have had ample experience to enable them to manage this institution, and the profession of the State and surrounding country are to be congratulated on being so fortunate as to have this institution fall into the hands of two such excellent gentlemen. They are reliable in every particular, and the profession can rest assured that patients placed in their hands will receive the most careful and proper attention.

The grounds and building are in every way adapted to the purposes of an institution of its kind. The building affords accommodations for forty patients, and is located in one of the most quiet and yet most accessible places around Louisville. The grounds are beautifully shaded by a beech forest, which affords a delightful cool shade and fine recreation grounds. The building is one of the most modern in every respect in the country, and all means that are known to science for relieving patients of the class that are confined in such institutions are found at Beechhurst.

Current Surgical and Medical Selections.

RECENT VIEWS OF THE EFFECTS OF ALCOHOL.—The conclusion reached by Professor Atwater, as a result of experiments conducted by him last year to determine the effects of alcohol on the human system, that the substance taken in small quantities and under certain conditions is a food, has given rise to much and bitter discussion. The garbled accounts given in the newspapers of Dr. Atwater's findings are chiefly responsible for this state of affairs. Many of these journals proclaimed that the professor had proved alcohol as a beverage to be harmless, whereas in fact he went no further than to declare that it is oxidized in the same manner as any other food materials, and is transformed into heat and muscular energy. The experiments were not sufficiently prolonged to demonstrate what the effects might be upon the human organism of the habitual use of alcohol, nor was any attempt made to show that such use would be any thing but harmful.

Another pronouncement on the same question has been recently made by the well-known Viennese clinician, Prof. Max Kassowitz, who asserts that the dogma concerning the nourishing and strengthening character of alcohol is one of the fatal errors of science. He holds the view that the majority of physicians take up an inconsistent position with regard to the use of alcohol, for the reason that while they are well aware of its dangerous and poisonous qualities, they nevertheless contribute to making permanent the false ideas concerning the value and effects of alcohol which are so generally disseminated. Kassowitz explains these inconsistencies on the ground that the teaching which considers alcohol a food because it is burned in the organism, has held its ground in spite of many disregarded newer investigations which have shown its indefensibility. He is therefore of the opinion that the assumption ascribing food properties to alcohol based on simple theoretical consideration is a grave scientific error, the removal of which is the most important preliminary condition to an effectual battle against alcoholism.

Dr. Hermann Blocher, of Basle, Switzerland, in an article in the *Internationale Monatsschrift für die Bekämpfung der Trinksitten* for April, comments very favorably upon Professor Kassowitz's utterances, and discusses the matter from the standpoint of physiological experiment. He refers to the investigations of Miura, which indicate that alcohol belongs to the same group of substances as glycerin, lactic acid, butyric acid, and so forth, which are indeed burned in the animal body, but which nevertheless are not fit, even to the smallest extent, to take the place of necessary food in the preservation of the body. Miura found that the addition of alcohol to the food before its being taken not only causes no diminution of the nitrogen output, and does not prevent the loss of body material (as is the

case with the addition of sugar or fat), but that on the contrary the nitrogen output following this addition of alcohol may become yet greater than it had been without this addition.

Professor Atwater did not pretend in his experiments to prove the innocuousness of alcohol as a beverage, and it was due to the newspapers that such a belief was disseminated. Whether alcohol in small amounts and used with discretion is harmful has yet to be clearly proved.—*Editorial in Medical Record.*

CANCER OF THE RECTUM IN THE FEMALE.—Wallace K. Oakes (*Journal of Medicine and Science*) reports a case of cancer of the rectum in a woman forty-six years old, and describes an operation which he thinks indicated in cases in which the patient is a female, and the cancerous growth is above the sphincter and below the sigmoid. In this case the growth was two and one-half inches up in the bowel, and completely encircled the rectal canal. The sphincter was dilated and the rectum attacked by cutting directly through the vaginal floor, beginning two inches above the vaginal outlet.

The incision was carried through the perineal tissues and into the rectum, the latter being laid open from this point, and through the sphincter. The rectal-tube was dissected away from the surrounding tissues, the section containing the cancerous growth excised, the upper segment pulled down and sutured to the lower segment containing the sphincter. The rectal, perineal, and vaginal tissues were then approximated by sutures. The patient has recovered, having complete control of the sphincter. There is as yet no sign of recurrence, although but a few months have elapsed since the operation. A woman with a cancerous rectum was treated similarly, in 1892, by Oakes; she lived for one year, and then died of cancer of the stomach. There was no sign of recurrence in the rectum.

The method of operating as described by Dr. Oakes was adopted in a case at the New York Post-Graduate Hospital in 1896, in which the feasibility of the vaginal incision was amply proven and the result satisfactory. Professor Horace Tracy Hanks, Gynecologist to the Hospital, operated as suggested by Dr. Daniel Lewis, the surgeon in charge.—*Medical Review of Reviews.*

SIGNIFICANCE OF THE STOOL IN INFANT DIARRHEAS.—Darnell (*Virginia Medical Semi-Monthly*) says that in infantile diarrhea from indigestion the movements are thin, yellowish, or muddy-brown, offensive, and perhaps accompanied by flatus. They soon become colorless and watery. The dirty, leaden-colored stool tells the tale of infected masses of imperfectly digested food. The green stool, acid in reaction, accompanied by colic, indicates too great a percentage of carbohydrates in the food; the passage resembles finely-chopped masses of spinach or parsley, mixed with particles of undigested casein or fat. Most to be dreaded is the small, col-

orless, watery movement, with here and there a small speck of light pea-green matter; it is often seen in marasmus. Mucus, when present in abnormal quantities, indicates an inflammatory condition of the bowel; if high up in the small intestines it is likely to be bile-stained; if in the colon or rectum it will contain jelly-like masses of mucus, and will be voided with tenesmus. Another not uncommon condition is seen in the whitish or grayish-white stools of putty-like consistency. The appearance is often very much like cigar ashes. Fischer states that these stools are composed largely of undigested fat; at any rate, there seems a total inactivity of liver function, since often no trace of the bile is found in the excretions. The constipated stool may be mentioned in passing. It is usually dry, pasty, and lumpy, and the result mainly of an insufficient quantity of fat in the food.—*Medical Standard.*

BOTTINI'S OPERATION FOR PROSTATIC HYPERTROPHY.—Freeman (Denver Med. Times) sums up the advantages of the operation as follows:

1. There is no mutilation and no external wound, the manipulations being carried out through the urethra.
2. A general anesthetic, so dangerous in the old and debilitated, is not often necessary, local anesthesia being usually sufficient.
3. There is very little hemorrhage, the vessels being sealed by cauterization.
4. There is comparatively small danger of serious infection, and usually but moderate rise in temperature, the wound being necessarily aseptic. The charred surfaces tend to prevent absorption until granulations appear.
5. In most instances patients may sit up and even walk about in a few days, which is of great advantage in those who are old and feeble.
6. The effects may be almost immediate, more or less urine being voided within a few hours, where it was previously impossible to pass a drop.
7. But few relapses have been observed; in fact, improvement has a tendency to be progressive.
8. The operation may be repeated if for any reason the attempt has been unsatisfactory.
9. The mortality is lower than with other effective measures.
10. Patients will avail themselves of this method of treatment when they will refuse to submit to castration, prostatectomy, etc.

RESULTS OF TESTING OF THE RENAL FUNCTIONS WITH METHYLENE BLUE.—Achard and Castaigne, who have in the past contributed a number of papers upon this new diagnostic resource, have now published a small monograph on the same subject (Paris, 1900).

The results thus far yielded by this method to date are as follows (it will be remembered by the reader that a solution of methylene blue is injected hypodermatically, and the interval noted before the color appears in the urine, as well as the duration of the period of elimination):

In interstitial nephritis there are evidences of impermeability, such as delayed appearance (frequently), and habitually prolonged elimination period. The authors have often made the diagnosis when other phenomena, such as albuminuria, were not in evidence. Considering the insidious nature of this disease, the test should be of great practical value.

In acute and chronic diffuse nephritis it is quite different. Permeability appears to be retained for a long time. The same holds good for amyloid kidney.

In functional albuminuria a slight prolongation of the period of elimination has been observed.

In passive congestion of the kidneys from cardiac weakness the elimination of the blue does not appear to be interfered with. After the condition is of long standing, irregularities of elimination will appear.

In diabetes elimination appears to be almost normal. If this disease coincides with actual organic disease of the kidney, impermeability is readily apparent.

In urinary surgery operators have employed the blue in doubtful cases to determine whether or not the kidneys are sufficiently impaired to contraindicate operations on the urogenital tract. The method has been combined with urethral catheterization, so that the permeability of each kidney may be ascertained.

It was thought that the blue might prove of service in obstetrical practice, and foretell the possibility of eclampsia through evidences of renal inadequacy; but these hopes have not been realized. An eclamptic may eliminate the blue normally, while a case which eliminates badly will present no evidence of likelihood of eclampsia.—*Medical Review of Reviews.*

EASY METHOD OF REDUCING SHOULDER AND HIP DISLOCATIONS.—Dr. Lewis A. Stimson (Med. Rec.) suggests the following simple method of reducing shoulder dislocations: A hole about six inches in diameter is made in an ordinary canvas cot. The patient lies upon this, with the arm hanging through the hole, the cot being raised some distance from the floor. A ten-pound sandbag is fastened to the wrist of the dependent arm. After a few minutes in this position reduction takes place spontaneously.

Dr. Stimson also applies this principle in dorsal dislocations of the hip. The patient lies face down upon a table with the legs and thighs hanging over at one end. An assistant holds the uninjured limb in a horizontal position. The dislocated member is allowed to bend at a right angle to the body at the hip; the surgeon grasps the ankle, holds the leg horizontally, and moves it gently from side to side. If the muscles do not relax, a five- or ten-pound sandbag is placed on the leg close behind the knee or pressure made there with the hand. This has succeeded in four-fifths of the cases. In two cases in which it failed, reduction was obtained by traction of the thigh in a line half way between right-angle flexion and extension. The method of reducing shoulder dislocations has been tried in ten cases without failure.—*Journal of Surgical Technology.*

SURGICAL CIRCUMCISION: ITS TECHNIQUE; PREVENTION OF INFECTION; ITS LEGAL CONTROL.—This paper was read by Dr. Ferd. C. Valentine, of New York, before the Section on Pediatrics, American Medical Association, June, 1900. After referring to the flattering compliment paid to him by being allowed to read a surgical paper before the section on pediatrics, Dr. Valentine recited the local indications for circumcision, and the general conditions in which the operation was required even in the absence of local disturbance. He described the technique of a very simple circumcision, and illustrated it by means of pictures taken from his book on "The Irrigation Treatment of Gonorrhea; its Local Complications and Sequelæ." Insisting that circumcision was a surgical operation, he averred that it should be performed only by medical men and in a surgical manner. He mentioned the fact that tuberculosis, syphilis, and other diseases were frequently communicated to infants by ritual circumcisers. The infants so infected become menaces to public health. If physicians were guilty of such acts, they would certainly become defendants in courts of law. Dr. Valentine advocated the legal prohibition of circumcision unless it was performed by physicians, and urged that devout Jews, who wished to follow the religious rite, could very well avail themselves of Jewish physicians appointed as ritual circumcisers in order to satisfy the requirements of their religion. These physicians could perform the religious ceremonies without violating asepsis and correct surgical technique. The speaker mentioned that those persons circumcised in youth seemed to be less liable to acquire syphilis than others.—*Ibid.*

PROSTATECTOMY.—The technic of this operation, claims H. Mynter, (*Annals of Surgery*, October, 1900), should be improved especially by avoiding suprapubic cystotomy or laparotomy in order to crowd the organ down to the operative field, and thus obviating the shock of the operation and the prolonged after-treatment in bed, to say nothing of the other greater risks. In a patient of his, weighing two hundred and forty pounds, and except for the prostatic disease perfectly healthy, he followed this method. The usual straight antero-posterior perineal incision was met by a semicircular one embracing the anus and close to it. The rectum was next freed and the prostate, well in view all the time, was crowded down by a hand above the symphysis pubis. A stone-searcher occupied and outlined the urethra. Enucleation of all the lobes was accomplished without deliberate opening of the bladder or the urethra. The urethra was accidentally torn between the sound and the finger-nail toward the end of the operation. This necessitated the drainage and the long after-treatment which would otherwise have been avoided. This tear can be escaped beyond doubt, the writer thinks. Where cystitis makes drainage necessary, a permanent catheter can be tried, or, failing in that, the urethra can be opened later in the perineum well forward. The removed prostate in this case weighed $2\frac{3}{4}$ ounces.—*Medical News.*

RESULTS OF OPERATIONS ON RECTAL CARCINOMA.—By Dr. Kroenlein (*Arch. of Klin. Chirurg.*).

The author, after reviewing the literature, concludes as follows :

1. Extirpation is the best method of treating cancer of the rectum.
2. About four fifths of the cases of extirpation of the rectum for carcinoma recover from the operation, and the wounds heal, while one seventh of the cases recover permanently.
3. The functional results are the best when, in removing the diseased portion of the rectum, the sphincter and anus are left intact.
4. The total removal of the whole of the rectum greatly interferes with the functional result, but renders the proportion of cures greater.
5. The selection of the perineal or dorsal method of excision depends upon the character of the case. The sacral method is especially appropriate for cases in which the cancer is situated in that locality.
6. In operations for the removal of cancer of the rectum, it is to be remembered that the rules of plastic surgery are applicable here with the greatest of energy, hence the proper placing of sutures and the close adoption of flaps of mucous membrane.—*The Post-Graduate.*

SYMPTOMATOLOGY, DIAGNOSIS, TREATMENT OF NEOPLASMS OF THE KIDNEY.—L. L. McArthur, M. D. (*Jour. Am. Med. Ass'n*). Two or more of the four cardinal symptoms are almost always sufficient to enable us to make a diagnosis: 1. Tumor in renal region. 2. Hematuria. 3. Pain. 4. Cachexia. In children almost the only symptom is tumor—pain is absent or ill-defined, hemorrhage in microscopic quantities, and cachexia apparent when the tumor has existed some time. Hematuria is present in 50 per cent of cases, and may be very slight or considerable. Occasionally blood casts of the ureter are found. They resemble angle-worms in shape and size, and are characteristic of slow bleeding from the kidney, permitting clotting of the blood in the ureter.

Pain is not a constant symptom, ordinarily dull in character; it is only acute when inducing obstructive colic, and is sometimes referred to bladder, groin, or testes. Diagnosis is not always simple. Aids in determining the diagnosis are: 1. Careful study of the clinical history. 2. Exact and frequent examination of the urine. 3. Palpation with or without anesthesia. 4. Cystoscope, ureteral catheterization, and exploration of sounds. 5. Direct exploratory incision (Rovsing).

In early youth sarcomata are the most common. They are of short history, rapid growth, large size, and are prone to recur. Prognosis extremely bad. In adult life, Hildebrandt concludes "If the tumor is very large carcinoma is improbable. Very slow growth speaks decidedly against sarcoma and carcinoma, but decidedly for the strumas (adrenals) and angiomata."

About 20 per cent of cases present neoplastic fragments after repeated examinations of the urine. When blood is found the stain for tubercle

bacilli should be made, as this is a frequent cause of hemorrhage and renal enlargement. When pus is found the stain for *bacillus commune coli* should be made, this being a causative agent in many pyonephroses (Guyon).

As to treatment, renal puncture is indicated for: 1. Simple cysts. 2. Hydronephrosis. 3. Hydatid cysts. Nephrotomy is indicated for: 1. Cases where puncture fails. 2. Pyonephrosis. 3. Suppurative nephritis and pyelonephrosis. 4. Tubercular kidney. 5. Calculous disease. Nephrectomy must be done: 1. Where nephrotomy fails or would be useless. 2. In certain neoplasms. 3. For fistulæ. 4. For degenerated kidney.—*Journal of Cutaneous and Genito-Urinary Diseases.*

TREATMENT OF CHRONIC CYSTITIS IN THE FEMALE BY CURETTEMENT OF THE BLADDER AND INSTILLATIONS OF CORROSIVE SUBLIMATE.—Cumston (N. Y. Med. Jour.) reports a number of cases of chronic cystitis in women in which, after curetting the bladder with a long, narrow Récamier uterine curette, he practiced daily irrigations with corrosive sublimate solutions, beginning usually with a strength of 1:4000, and running up as high as 1:500. These irrigations may at first be made only every other day, increasing to daily when well borne by the patient.

Cumston sums up his experience, as well as that of others, in which this method of treatment was used, in the following conclusions:

(1) Sublimate instillations will often produce *a very great improvement in the distressing symptoms* met with in both tuberculous and non-tuberculous cystitis, such as a diminution in the frequency of micturition, a decrease of the pain, increase in the capacity of the bladder, and an improvement in the condition of the urine. In *some cases* a complete cure may be obtained.

(2) When the instillations *fail to produce the desired effect*, curettement of the bladder is indicated in both tuberculous and non-tuberculous cystitis.

(3) In gonorrheal cystitis instillations of sublimate are particularly efficacious, and rapidly subdue the pain.

(4) Under favorable circumstances a radical cure of primary tuberculous cystitis may be obtained by curettement when *the vesical lesions are localized and the kidneys free from the disease*. Curettement *per urethram* will not allow the surgeon to reach the entire surface of the bladder, so that *when the lesions are extensive they should be directly treated by suprapubic cystotomy*.

(5) Much relief may be afforded by curettement to a large number of patients suffering from tuberculosis of the bladder, but who on account of the advanced stage of generalized infection are in no condition to undergo a more radical operation.

(6) When cystitis is due to a prolapsus of the genital organs, and when *hysteropexy, combined with anterior and posterior colporrhaphy*, does not relieve the bladder symptoms, curettement of the bladder, followed by sublimate instillations, is the proper treatment.—*Memphis Medical Monthly.*

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